

INSTITUTE OF EDUCATION

**Diving for pearls: an exploration of
cognitive dissonance as an
educative resource in complex
professional learning**

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Abstract

This study explores cognitive dissonance as an educative resource in complex professional learning.

Cognitive dissonance is an elusive phenomenon but one which is experienced by many adult learners as they engage in professional development. Research suggests harnessing the range of emotions felt from experiencing cognitive dissonance and using it as an educative resource can be a positive approach in complex professional learning. However, facilitators of professional learning appear to find it challenging to identify characteristics of cognitive dissonance and recognise it as it occurs within learners.

There is little guidance to be found on how facilitators might make most effective use of cognitive dissonance as an educative resource to support transformative learning.

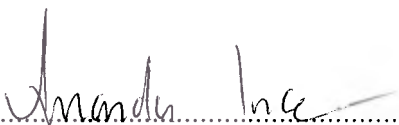
An exploratory case study was adopted to investigate how cognitive dissonance was recognised and experienced by learners and facilitated by tutors engaged in an intensive literacy intervention professional development programme. Data were analysed using a grounded theory approach within a theoretical sampling frame to create a conceptual model of how cognitive dissonance was experienced by learners, recognised and utilised by facilitators as an educative resource.

This study identified characteristics and features of cognitive dissonance that may support facilitators in recognising and harnessing it as it occurs. Study of facilitators' skills in recognising and managing cognitive dissonance within the professional learning environment revealed a complex relationship between their observational acuity, experience in role and personal commitment to critical reflection. Conscious decision making by the facilitator within a learning environment that supports risk taking creates more effective use of cognitive dissonance as an educative resource.

Declaration

I hereby declare that, except where explicit attribution is made, the work presented in this thesis is entirely my own.

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Signed:  Amanda Jane Ince

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Statement: From teacher to research practitioner

In the beginning...

The notion of a learning journey is somewhat clichéd in educational circles yet apposite since at the end of the first taught module on the Ed.D programme that is what I was trying to map out. The Foundations of Professionalism module created a bridge for me between my previous professional roles, from early years to Further Education, private and state sectors into a new opportunity as part of the National Leadership team for Reading Recovery based at the Institute of Education (IOE), University of London. The concept of professionalism was one that I could readily identify and use to discuss my personal position as a learner and previous experiences. I reflected on how I came to be at the IOE and I applied what I learnt to critique prior organisations, roles and responsibilities. At the end of the module we were asked to look forward and offer a visual representation of our next steps. I drew a train journey, the modules were stations and the track of self discovery stretched towards the horizon. Looking back it was a naive and excited interpretation of making progress towards becoming an academic, and one which was firmly rooted in prior achievements and roles.

Shifting my perspectives from teacher to researcher/ academic began with the start of the specialism module, tailored to meet the professional requirements of my role within the Reading Recovery national leadership team and the Ed.D criteria. These weekly seminars and readings alongside the observation of expert literacy teachers on their journey towards becoming teacher-educators through the MA professional route programme provided me with a context for tussling with my own understandings. It seemed that there were parallel journeys for the children within the literacy intervention, teachers becoming teacher-educators and my journey as an academic. Despite the differences in experience, the challenges appeared similar: the disorientation of finding

that new learning is hard, emotional aspects of learning, problem-solving often collaboratively with colleagues echoed across my observations and readings. I found myself confronted with the challenge of wanting and needing to find out more but not sure of the best route. I strongly identified with Schön's assertion:

The paradox of learning a really new competence is this: that a student cannot at first understand what he needs to learn, can learn it only by educating himself, and can educate himself only by beginning to do what he does not yet understand (Schön, 1987, p.93).

Working within the national leadership team and teaching at IOE I felt that I was beginning to grapple with what I needed to learn. Engaging in research seemed the way forward yet I lacked understanding, which created a tension for me. Gradually, I discerned a common theme that united these differing aspects and resonated strongly with my personal journey and my professional interest. Discourse with academics through the taught modules and the opportunity to explore this theme through my assignments focussed my interest towards cognitive dissonance, for which I adopted Festinger's definition that 'cognitive dissonance can be seen as an antecedent condition which leads to activity orientated toward dissonance reduction' (1957,p.3).

Paradigm shifts

The Methods of Enquiry 1 module (MOE1) was a turning point for me. I felt settled into my professional role within the national leadership team and the assignment allowed me to explore aspects of ontology and epistemology which were new concepts. Engaging with these as part of a professional doctorate felt messy and I recognised myself in Schön's description below:

There are those who choose swampy lowlands. They deliberately involve themselves in messy but crucially important problems and when asked to describe their methods of inquiry they speak of experience, trial and error, intuition and muddling through (Schön, 1983, p.42).

I felt I was muddling through and lacked a coherent articulation of my research approach, it was uncomfortable and I was keen to make a shift in understanding.

During this time I identified that cognitive dissonance was sufficiently, both personally and professionally, interesting to sustain exploration for a considerable period of time and I started to engage with and critically review literature. Initially I focussed on the affective domain and the transformative nature of learning based upon my observation of learners on the MA professional route programme. This gave me insights into the complexity of adult professional learning which went beyond the surface learning sometimes associated with short term professional development (Biggs 1999; Bangs, Macbeth, Galton, 2010). Keeping a learning journal throughout the process and reflecting on personal experience was a transformative learning opportunity in itself (Brown and Dowling, 1998). Simultaneously I was seeing other learners tussling with their understanding, this engagement with joint problem-solving helped me to locate my personal stance as a researcher within a constructivist paradigm (Kroll, 1994).

I used my MOE1 assignment on 'The Role of Dissonance in Advanced Professional Learning' as a springboard into MOE2 and my small-scale research project. My focus was on the documentation produced as part of the MA professional route and led to an assignment entitled: 'Can portfolios be used as a source of evidence for dissonance within the Reading Recovery Teacher Leader Training?' I discovered that I enjoyed being immersed in data and that analysis was not something that other people did, it was something I could do and enjoy. The compilation of my portfolio at the end of the taught modules served as a point of departure for me. I had begun with the simplistic and linear image of a train journey and clearly defined markers (modules) along the way. Now I was moving away from a structure of taught input into a more personally defined time line for progress and intrinsically motivated study approach. Reflecting on my journey from practitioner to researcher I look back on the taught modules with

gratitude as they provided a clear structure and shape. The deadlines and focus had kept me moving forward and enabled me to develop professionally in a new role whilst extending my learning. The modules also acted as a type of dress rehearsal for the IFS all of which supported transition to the thesis stage.

When I reflected on the taught modules as part of the statement within the Ed.D portfolio I found personal resonance in references I had previously applied to my observations. I felt that not only was I researching the transformative nature of professional learning but had become a participant too:

Learning may be understood as the process of using prior interpretation to construe a new or revised interpretation of the meaning of one's previous experience in order to guide future action (Mezirow 1991 p.12).

This experience served as a good grounding for my Institute Focussed Study (IFS). As I prepared my proposal I appreciated how much the four taught modules scaffolded the research process as my interest in cognitive dissonance developed through exploring literature and considering applications to practice. I felt I was creating a solid basis for moving forward and one which pulled my previous learning together. Figure 1.1 indicates how I felt the modules and assignments filtered my interests from a more general exploration of cognitive dissonance towards a tightly focussed IFS, achieving more than the sum of their parts.

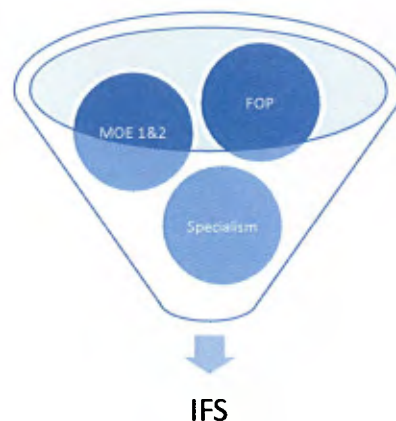


Figure 1.1: Taught modules leading to IFS

Professional identity

The learning community of Reading Recovery professionals across the world value research and are keen to support colleagues:

Reading Recovery is a system wide intervention that involves a network of education, communication, and collegiality designed to create a culture of learning (Lyons, Pinnell, DeFord, 1993, p.2).

The expectation that all within the community are learners creates a culture that is supportive of research and enabling of ethical permissions and participant observation. This culture of learning provided rich resources for exploring cognitive dissonance in complex adult professional learning. My IFS research questions focussed on first, what leads professional educators to reflect on their practice and second how does meaningful reflection lead to improvement in practice? Understanding dissonance in greater detail and working towards identifying possible features of this catalyst for learning were important outcomes for my study. The interim findings from my IFS provided the content for a poster presentation at the doctoral school conference. Feeling part of the research community and sharing findings helped me to make a further shift in my professional identity as a researcher although as Schutz and Peckrun suggest the shifts were not always straight forward or linear:

Thus teachers' identity not only influences their actions and emotions, but also their professional identity formation.teacher identity and emotion are not linear or unidirectional; rather, they are inextricably related to each other through an ongoing multidirectional, transactional process (2007, p.227).

The tentative features of cognitive dissonance proposed as findings from my IFS became the starting point for my thesis and helped me to focus my research questions on how cognitive dissonance might be more readily recognised, characterised and utilised by facilitators as an educative resource. During this period I tussled with my

own cognitive dissonance as I assimilated new information, skills and knowledge into my existing constructs.

Adult education as a transactional encounter is essentially a process. Central to this process is a continual scrutiny by all involved of the conditions that have shaped their private and public worlds, combined with a continuing attempt to reconstruct those worlds. This praxis of continual reflection and action might accurately be viewed as a process of lifelong learning (Brookfield, 1986, p.294).

Engaging with this process gave me the confidence to present conference papers based on my IFS, for example as part of a symposium at British Educational Research Association (BERA) 2011 with colleagues from the Reading Recovery National Leadership team. This was a swansong in terms of being a part of that particular learning community as I changed roles within the IOE and took up an academic post within the Primary Post Graduate Certificate of Education (PGCE) team. The shift in professional role accompanied a shift in identity.

Preparing for the upgrade from IFS to thesis gave me an insight into the viva process and helped me to clarify my thinking and tighten thesis planning. I was able to develop my thinking about cognitive dissonance and consider how this might contribute beyond my immediate context. Presenting papers at an international conference in Samos in July 2012 and at BERA 2012 signalled a transition in my personal journey from practitioner to practitioner researcher as I'd tried to represent graphically in the first taught module. The experiences highlighted the distance I had travelled in terms of my confidence and ability to shape an argument and articulate it coherently within an academic context. The opportunity to engage in discourse across disciplines and cultures reinforced both my personal and professional identity and role within a research environment.

The future

Looking back a great deal of time has passed since my initial enthusiastic drawing of a train track to symbolise my learning journey. However, the time seems to have flown by and been filled with exciting and challenging events and opportunities created by being part of a much larger learning community at the IOE.

I see the next challenge as how I might locate and establish myself within the educational research community. I believe that the professional doctorate process has enabled me to engage in what Hargreaves and Goodson call

a self directed search and struggle for continuous learning.. and a commitment to working with colleagues in collaborative cultures of help and support as a way of using shared expertise to solve the ongoing problems of professional practice (1996, p.20).

I feel excited and eager to continue exploring how that might be experienced in the future. The immediate next steps seem to be about disseminating my research and converting presentations to papers for publication. Beyond that I am keen to continue my search for ‘pearls’ of learning and to apply my learning to new challenges for:

the more we know, the more we do not know and the more we need to seek assistance to grasp new knowledge and insights (Lyons, Pinnell, DeFord, 1993, p.180).

Chapter 1:

Exploring cognitive dissonance

1.1 Introduction

This study explored the concept of cognitive dissonance in complex adult professional learning. It began with a realisation that whilst the phrase ‘cognitive dissonance’ is widely used, finding a consistently adopted definition was more difficult. This difficulty was compounded by inconsistencies in recognition of cognitive dissonance. For example: Meyer and Shanahan (2003) discuss dissonance in terms of ‘an interference model’ (p.5) whereas Postareff, Katajavuori, Lindblom-Yliänne and Trigwell (2008) posit that ‘dissonance refers to atypical combinations of approaches to and conceptions of teaching that do not fit together (p.51). Perhaps as expected of a concept it can appear abstract and elusive. Yet in many professional learning contexts cognitive dissonance seems to be actively employed in supporting learning (Galman, 2009; Taylor and Ince, 2012 a). This apparent tension between the professed use of cognitive dissonance and locating a clear and accepted definition opened up an area for exploration. This was made more intriguing by discovering that the complexity of defining cognitive dissonance extends beyond the academic and its origins within social psychology (Cooper, 2007). Cognitive dissonance also appears in fiction:

And like any form of cognitive dissonance in a society, they existed because they were given sanction and even lionized (Burke, 2009, p.492)

And in news items:

The Tory leader is the only game in town but there are worrying inconsistencies in his message. Cognitive dissonance, I think it’s called (Mackay, 29/11/2010).

The shift into mainstream usage with multiple interpretations and applications of cognitive dissonance create a potential problem for a new study, as identified by Lindblom-Ylianne (2003). Subtle but important differences between the ways in which

cognitive dissonance is applied in studies and differences in interpretation or recognition potentially affect the construct for a new study, for example: identity dissonance (Warin, 2003), study orchestration (Boulton-Lewis, Wilss and Lewis, 2003; Lindblom-Ylianne 2003; Vermunt and Minnaert, 2003). The current definitions and studies which I discuss in detail in Chapter two employ their concept of cognitive dissonance as a phenomenon applied to particular educational contexts (Cano, 2005; Warin, Maddock, Pell and Hargreaves, 2006; Galman, 2009). Amongst a multiplicity of definitions of cognitive dissonance there seems to be a need to move towards more precise identification of the features of cognitive dissonance and further clarity on how facilitators might recognise and harness cognitive dissonance more effectively to support learning. So my problem was twofold. Initially, it was how to identify a definition of cognitive dissonance that was applicable to existing interpretations and studies and which would support my study. Then, the aim was to gain greater understanding about the features and characteristics of cognitive dissonance. I aimed to contribute to the field of knowledge by offering further clarity so that facilitators might recognise and harness cognitive dissonance more effectively to support learning. This study exploring cognitive dissonance as an educative resource aims to contribute to both my identified gap in defining and recognising cognitive dissonance in the field of professional learning and a wider understanding of the phenomenon.

1.2 Defining cognitive dissonance

For this study I have elected to adopt Festinger's original posit that cognitive dissonance is an inconsistency in cognition and 'cognitive dissonance can be seen as an antecedent condition which leads to activity orientated toward dissonance reduction' (1957, p.3). I chose to adopt Festinger's antecedent condition as my starting point because tracing the development of dissonance from this original work built my understanding. I recognise that although his definition is over fifty years old, it has been

critiqued, developed and his premises remain valid with subsequent studies taking their stance as an interpretation of cognitive dissonance as applied to their specific contexts (Lindblom-Ylänne, 2003; Meyer 2003; Cano 2005; Galman 2009). Festinger focussed upon the inconsistency in cognition and the actions taken to reduce that inconsistency or dissonance induced by the disequilibrium created cognitively by new information, realisations or understandings. Subsequently understandings of cognitive dissonance seem to be sufficiently widely shared such that 'dissonance' has been adopted and applied to a variety of educational contexts including transformational learning (Mezirow, 1991, 2009), problem-solving (Newman, 1989), identity dissonance (Warin, 2003;2006) and study orchestration (Boulton-Lewis, Wilss and Lewis, 2003; Vermunt and Minnaert, 2003). These applications of cognitive dissonance are discussed in detail in Chapter 2.

Festinger (1957) locates dissonance reduction as a human condition, in striving to reduce the dissonance (or rather the emotions it creates) new understandings develop as a result of assimilation and accommodation (Piaget, 1967). Being motivated to construct a new understanding comes from an inconsistency (Brehm, 1962), cognitive conflict (Wicklund, 1976), dissonance (Festinger, 1954, 1957), disequilibrium (Piaget, 1967) or from decision making in order to problem-solve (Newman, 1989; Mezirow, 1991). These interpretations of learning rely upon the individual having a personal construct that acknowledges conflict between existing knowledge and the new. Kelly (1963) describes these personal constructs as representing the truth as that individual understands it, shaped by their previous experiences and reflections to make meaning of the world as they see it. This individual understanding of the world is reflected in the behaviours of the individuals as they experience different situations, challenges and tensions. How they manage their behaviours is influenced by what Argyris and Schön (1974) describe as a 'theory-in-use' which enables them to get what they want and

maintain a consistency in life. That consistency could be interpreted as dissonance reduction, in that it avoids inconsistency and creates parameters within which the individual operates until the variables within it reach such intensity as to force a change. It is that change which is the focus for my exploration of cognitive dissonance as an educative resource. Using Festinger's work as my starting point highlighted the potential tension between exploring something that is difficult to observe and yet can be a powerful part of professional learning (Galman, 2009). In professional learning learners may have their 'theory in use' challenged creating 'dilemmas' (Argyris and Schön (1974, p.31). I argue that cognitive dissonance may appear as 'pearls before swine' (Matthew 7:6). So although the challenge to existing constructs is often unwelcome for the learner it offers a 'pearl', a valuable opportunity to recognize the dilemma. Recognition of the dilemma may also create a tension to resolve it, Festinger's 'dissonance reduction' (1957 p.3), and according to Argyris and Schön (1974), motivation to learn. In the complex context of professional learning it seems that the ability to recognise 'pearls' and to see them as opportunities to create dilemmas, challenge constructs and motivate learning is valuable. This is why I have selected 'pearls' as the basis for an analogy to support my exploration of cognitive dissonance as an educative resource.

1.2.1 Diving for pearls:

The oyster creates pearls from a grain of sand that acts as an irritant when it is inside the mantle of the oyster. The instinctive reaction of the oyster is to reduce the irritant. To calm this irritant the oyster covers it in layers of nacre which produces a pearl. I argue that the oyster's production of a pearl can be adopted as an analogy for cognitive dissonance in professional learning. In complex adult professional learning the irritant might be seen as the grit created from teacher experiences of tension, risk, discomfort,

challenge, without which there is no friction with which to create the pearl. The oyster's pearl production mirrors the natural human condition of wanting to reduce dissonance and regain comfort. The pearl, in this case, is creation of learning. In cultured pearl production, an irritant is artificially introduced into the oyster, controlling the quality of the outcome, whereas a natural pearl is produced through a natural irritant reaction. Oysters can take a long time to create pearls and the harvesting of pearls involves risk to the fishers, but the results are highly valued. In education we expect quicker results and are less concerned with distinctions between cultured and natural pearls, perhaps because we recognise that in undertaking professional development we are creating the culture for change (Fullan, 2006). Similarly there are risks associated with complex professional learning and pearls of new learning vary in quality. Experiencing a gritty situation and confronting challenge is not always at the forefront of adult learners expectations when they embark on new learning (King, 2005).

Thus my starting point in exploring cognitive dissonance is Festinger's (1957) definition but I adopt Mezirow's framework (1981, 1991, 2000, 2009) to suggest that the antecedent condition is manifest as a 'disorientating dilemma' (1991, p.168). This in turn draws from Levinson whereby 'no matter how satisfactory a structure is, in time its utility declines and flaws generate conflict that leads to modification or transformation of the structure' (1978, p55). However Levinson's marker events vary from Mezirow's assertion that the 'traumatic severity of the disorientating dilemma is clearly a factor in establishing the probability of a transformation' (1981, p.7). The traumatic events that Mezirow cites such as bereavement have a truism but seem far removed from the deliberate introduction of a disorientating dilemma into an educational context for the purposes of facilitating professional learning. Rather my interpretation of a disorienting dilemma has features in common with the 'individual perception of professional challenge/triggers' described by Lange and Burroughs-Lange (1994).

I argue that recognition of and response to dissonance is very much individually experienced. What strikes one person as dissonant may be consonant for someone-else. This seems to find echoes with Long who suggests 'that dissonance operates in the micro-environment of the individual learner' (2003, p.33). This in itself creates a tension. The nature of an educational setting suggests a group of learners who bring individual expectations and understandings which in themselves may be dissonant (Boulton-Lewis et al. 2003). The nature of learners' experience and expectations has implications for the use of cognitive dissonance. Many professional learners come to the learning environment secure in their knowledge and professional role. They are experienced and successful. Their expectation of being a learner is often based upon long held assumptions about the nature of knowledge and their personal approach to studying:

Some students adopt a deep approach, motivated by intrinsic interest, focused on building personal understandings, and achieved by building understandings through thoughtful analysis of ideas and evidence. Other students adopt a surface approach, motivated by fear of failure and extrinsic concerns, focussed on minimal coping, and accomplished by memorisation and procedural learning (Perkins, 2006, p.36).

This range of differences in approach can affect learning when operating alongside students' perceptions and experiences of cognitive dissonance. Cognitive dissonance might occur through a mismatch between preconceived ideas about learning, the nature of knowledge and a personal approach to learning. Dissonance may be deliberately introduced by a facilitator explicitly by playing 'devil's advocate' or implicitly through the choice of resources, readings, and learning activities. Cognitive dissonance may be created through the building of understanding by a group discussing and sharing their personal constructs leading to questioning. In professional learning modifying, developing and constructing new understandings to inform behaviours, actions and

personal constructs is important. Argyris and Schön see formulating or modifying a theory-in-use as a form of learning.

When our theories in use prove ineffective in maintaining the constancy of our governing variables, we may find it necessary to change our theories in use (Argyris and Schön, 1974, p.17).

Creating a situation whereby the learner needs to change is a key role of cognitive dissonance in curricular use. Galman (2009) identifies the power of dissonance as a catalyst in identity transformation and suggests that signs of discomfort in learners are actually indicators of progress. However, feeling discomfort is not a usual expectation of adult learners when they embark upon further professional study. It is compounded by the individual nature of learners each bringing their own constructs, expectations and experiences to the situation. This makes adult professional learning both complex and individually experienced. Complex because there are potentially conflicting demands between the professional learning expectations, the learners experience of previous development and the learners' personal constructs, all competing within the same learning environment (King, 2005). Simultaneously, each individual within the group of learners and the facilitator have individual encounters with the same experiences yet according to their personal constructs these will vary in intensity and outcome (Kelly, 1963). There seems to be no consistency in disorientating dilemmas affecting all learners in the same way. Studies seem to suggest two possibilities. One is that the learner is 'ready' for transformative learning (Taylor, 1994) and studies focussed on the personal, historical, socio-cultural events surrounding the person which may have made them more responsive (Taylor, 2008). Another possibility is the type of disorientating dilemma. Scott (1991) posited that there needed to be two types of disorientating dilemma for transformation to occur. These were an external event triggering an internal dilemma and an internal recognition that previous approaches were not working. I would argue that rather than being two types of disorientating dilemma these are

actually in line with Mezirow's original ten stages (1981). So that the recognition of failing systems is actually an interpretation of Mezirow's stage two, feelings of guilt and shame (*ibid*), which I discuss in Chapter 2. Furthermore, I argue that the factors that affect whether a person experiences a disorientating dilemma which then leads to transformative learning are also about the facilitation of the initial trigger, the learning environment including affective domain and the role of critical reflection (Ince, 2010).

It appears that as an abstract concept cognitive dissonance has a multiplicity of interpretations and a long history of research interest. Cognitive dissonance remains elusive and problematic in its definition, manifestation and application in educational practice. This makes it intriguing and fascinating. The challenges in identifying and conceptualising cognitive dissonance, to create a clarity and consistency, inform decisions made in this study. I chose to explore cognitive dissonance as a phenomenon by selecting theoretical perspectives about adult learning and a particular context for complex professional development to create a 'prism' after Corbin and Strauss (2008, p.50) that I believe sheds light on cognitive dissonance through an unusual lens (Clay, 2001). Like the development of pearls and particle physics or other phenomenon, cognitive dissonance exists, is difficult to pin down and see but it appears possible to explore through viewing manifestations in those affected by it. So my prism for exploring cognitive dissonance are 'the activity orientated towards dissonance reduction' (1957, p.3) of Festinger, the perspective transformation of Mezirow and the behaviours of adult learners within a complex professional learning environment as the context for this study.

1.3 Context

Complex adult professional learning can be seen as part of a lifelong approach to learning (King, 2005). In education, teachers are required to engage as both learners and teachers throughout their careers and there is an in-built expectation that they attend a

minimum amount of professional development on an annual basis. The focus for this is often based upon the needs of the school or organisation in which they work and may be less about individual development opportunities and more about updates and curriculum developments. Alongside this is a flourishing market economy in personal engagement with learning as well as for professional development, for example 'lifelong learning' (DES, 2000). This can be evidenced through the opportunities for continuing professional development offered through universities, local providers and individuals seeking out courses and programmes in areas of personal interest, some of which are linked directly to employment and others across wider aspects of professional development. This study focuses upon an employment-linked qualification in early literacy and literacy learning difficulties at Masters level offered by the Institute of Education, University of London (IOE). I refer to this award throughout the study as a professional Masters (PM). At the start of this research my professional role was as a facilitator of the PM programme. This programme is only available to those who are already successful professionals in education. Participants require a minimum of three years relevant experience and must have the support of their employer to apply (RRNN, 2006). The participants enrol for a variety of reasons, personal and professional, but the stated outcome for all is higher professional development opportunity linked to becoming teacher-educators, a specific teaching role aspects of which are new to them all. The recruitment criterion for this particular programme is thorough and the rigours and their rationale for the programme are made clear at the outset. It is a minimum of one year's taught input on a weekly basis, and field work including a daily teaching commitment leading to employment as a teacher-educator. This is followed by a potential further year of independent study to achieve the Master's award. Those applying consider themselves and are indeed considered by their employers to be experts in early literacy and competent professionals for whom this opportunity offers

accreditation and career development. They do not start the programme with the expectation that their previously held beliefs and practices are about to be challenged and that they will find their learning uncomfortable at times. However, the programme explicitly uses cognitive dissonance as a tool and is underpinned by a constructivist approach to learning which many find new and challenging (Baviskar, Hartle, Todd and Whitney, 2009). Cognitive dissonance is explicitly introduced to participants through seminars, discussions and handouts, (examples are in Appendix 1) and facilitators use opportunities during sessions to challenge previously held assumptions, create situations for “playing devil’s advocate” and to introduce opportunities for participants to feel a discrepancy in cognition (Festinger, 1957; Ince, 2010) . Facilitators on the programme have a shared understanding of the professional development model that they have adopted and recognise Darling-Hammond and McLaughlin’s statement:

Effective professional development involves teachers both as learners and as teachers and allows them to struggle with the uncertainties that accompany each role (Darling-Hammond and McLaughlin, 1995, p.82).

The constructivist approach underpinning the programme sees learning as an active process with learners actively engaged in knowledge acquisition and building their understandings (Kintsch, 2009). The programme adopts a seminar and workshop approach often through collaborative working with facilitators guiding and enabling (Perkins, 2006). A specific aspect of this approach is the use of a one way observation mirror, known by participants as the ‘screen’. Facilitators lead the programme participants in the active observation of individual literacy lessons viewed through the one-way screen and prompt for collaborative discussion calling for learners to offer tentative hypotheses about the observed teacher-child interactions. The aim is for these participant professionals to be able to take informed decisions and problem solve in their unique professional contexts beyond the end of the professional development programme.



Figure 1.2: Facilitator (teacher educator) leading teachers in observation and critique of a literacy intervention lesson through a one way mirror (the screen).

Working as a group in this way behind the observation screen, as shown in figure 1.2, is an intensive learning environment and one that engages the participants and facilitator in complexity of adult professional learning. It operates as a microcosm of learning environments. Participants are fully engaged in a shared focus in a real time situation where their contribution matters and their individual perspective adds to the group knowledge -building with a real outcome for the teacher being observed and for the group as a whole. Geeke describes this as ‘a dynamic relationship between belief and practice’ (cited in Lyons et al. 1993, p.42). Whilst this can be seen as facilitative of problem solving and ongoing learning there remains the issue of how to enable programme participants to develop theories of learning that shift their praxis and understandings (Lyons, DeFord and Pinnell, 1993). Confronting alternative views and practices in such an environment offers opportunities for critical reflection, tentative hypothesising and provides a potentially powerful stimulus for transformation. The context for this study, an accredited professional development programme for experienced education professionals, adopts a constructivist approach and explicit use of cognitive dissonance as a learning tool, within the controlled environment of the screen. Within this complex environment the situated learning behind the screen and the opportunities it provides for facilitators to introduce or to utilise cognitive dissonance as it occurs forms the location for this study.

1.4 Summary

This chapter began by raising the problem that defining the concept of cognitive dissonance has attracted a multiplicity of interpretations. I sought to identify an understanding of cognitive dissonance which built upon previous conceptions (Festinger, 1957, 1964) and which supported my exploration of the phenomenon of study as an educative resource. Identifying characteristics and working towards recognisable features of cognitive dissonance was important because whilst the education community, and specifically that of the professional Masters at IOE, explicitly uses cognitive dissonance as a tool, there is a need for further clarity and to develop consensus. Beyond the preparation of experienced professionals as teacher-educators via the professional Masters, an example of complex professional learning, cognitive dissonance is identified as a powerful tool for learning (Cano, 2005; Galman, 2009). Cognitive dissonance appears in literature on study orchestration (Lindblom-Ylänne, 2003), transformative learning (Mezirow 2009), constructivist approaches to learning (Baskivar, Hartle, Todd and Whitney, 2009), and identity transformation (Warin, 2003). It has entered the public domain with widespread use through fiction and news items, and yet it remains an elusive concept. My aim was to explore cognitive dissonance so that facilitators of complex professional learning, in whatever field of study, might have greater understanding of how they can recognise and effectively utilise cognitive dissonance in professional development. From that I hypothesised that greater understanding might enhance its use and value within the transformative learning process as an educative resource. I adopted the analogy of oysters producing pearls because it appeared to offer questions around parallels and paradoxical comparisons in considering how to approach the problem of pinning down cognitive dissonance. As a problem-solving approach to exploring cognitive dissonance I adopted selected prisms to bring a researcher's eye to exploring the reactions and outcomes of

engaging with cognitively dissonant activity. These prisms prompt the theoretical perspectives discussed in the next chapter.

Chapter 2:

Theoretical perspectives as lenses for exploring cognitive dissonance as an educative resource

2.1 Introduction

In this chapter I begin by identifying prisms through which to focus upon the complex and seemingly elusive phenomenon of cognitive dissonance as an educative tool in complex adult professional learning. The inability to ‘see’ cognitive dissonance creates a potential difficulty in exploring it. Instead my approach is to consider the ways and contexts in which cognitive dissonance is experienced within educational contexts.

From this I draw upon literature to shine light on the phenomenon and create lenses for exploring cognitive dissonance in greater detail. I start by introducing key concepts and terms. These are defined and discussed using a range of literature to explore nuances and to locate professional learning including transformative learning (Mezirow, 1991), critical reflection (Cranton, 1986), the facilitator role and learning environment within praxis. By establishing definitions from the start I underpin subsequent discussion and create an argument for the recognition of cognitive dissonance as a powerful educative tool. This argument is a response to a call within literature (Taylor, 1997; Schurgensky, 2002; Snyder, 2008) for a shift from a focus within transformative learning and adult professional development on participants towards a greater understanding of how the transformative process within praxis might be understood. I argue that cognitive dissonance has an important role within the process of transformative learning as an educative tool. Furthermore, whilst the introduction of cognitive dissonance into a secure learning environment might feel counter intuitive given the complexities of adult professional learning, if facilitated skilfully the opportunities for transformative learning outweigh the disadvantages.

2.2 Professional learning

Learning, according to Mezirow may be understood as:

the process of using prior interpretation to construe a new or revised interpretation of the meaning of one's previous experience in order to guide future action (1991, p12).

This is an interpretation I adopted as a starting point for my exploration of cognitive dissonance in this study. I recognise that learning for teachers is often identified as professional development, and that learning and development are not necessarily synonymous. However, I argue that since teachers are engaged in active problem solving, which Piaget places 'at the heart of learning and development' (cited in Wood, 1998, p.5) the divide is artificial in this context. Furthermore, the process to which Mezirow refers is my identified location for the use of cognitive dissonance in this study. Therefore, I felt it was important to develop an understanding of professional learning, including professional development which differentiates between surface and deep learning (Biggs, 1999) and encompasses the complexities of adult professional learning (Pickering, 2007). Professional learning is at the core of this study. The environment of behind the screen, used by teacher-educators and the professional Masters programme, offers potential for observing examples of complex professional learning in action. Once accredited, teacher-educators provide an initial professional development programme (IPD) for experienced class teachers to become accredited literacy intervention teachers. This is followed by continuing professional development (CPD) which experienced literacy intervention teachers engage in throughout their time in role. In parallel, accredited teacher-educators engage in CPD led by University tutors, who in turn are involved in their own continuing professional development. These parallel contexts within which the professional development programme operates strongly identify with Eraut's view that: 'Professional development should be planned and conceived as a lifelong process in which formally designated educational activities

play an important role at all stages' (1992, p.3). Similarly the curriculum for both teacher-educators and literacy intervention teachers endeavours to initiate and further enhance life-long learning processes. Within literature the term professional learning is potentially loaded with ambiguity and possible confusion. There is an extensive literature in its own right on professionalism (Eraut, 1994; Hargreaves and Goodson, 1996; Friedson, 2001; Cunningham, 2008). Defining professional learning in any context relies upon an understanding of the epistemology of the context. The term 'teacher' is well recognized and has an attached identity for example: religious, historical, cultural, although this identity varies according to many factors including personal experience. Beyond the generic terminology is an increasingly complex discussion about the roles and status of teachers as professionals (Etzioni 1969; Eraut 1994; Hargreaves and Goodson, 1996; Freidson, 2001; Cunningham, 2008). In English we can read 'professional' as 'belonging to a profession or calling' (Collins Dictionary and Thesaurus). As a calling or vocation then teaching seems a core profession, however, there are other interpretations and theories that impact upon the recognition, status and respect attained by teachers as professionals. These are complicated by the multiple discourses on the nature of 'professionalism' itself and from a relatively straightforward dictionary definition and an inherited cultural concept it develops into a complex and ongoing argument with its own terminology (Cunningham, 2008). In this study, all participants and programme tutors are qualified and experienced teachers. They may have further experience, qualifications, and have taught across different disciplines and age ranges but they share a core understanding of what it means to work in a mainstream primary classroom in the British education system. In developing my understanding of professionals within teaching I found reading of Hargreaves and Goodson (1996) helpful. They review the previous notions of professional and professionalism recognizing the overlapping nature within the different discourses and

identifying 'classical professionalism, flexible professionalism, practical professionalism, extended professionalism and complex professionalism' (Hargreaves and Goodson, 1996, p.4) and propose another form, that of 'post modern professionalism'. In this model they offer seven principles of professionalism, including: 'continuous learning' (*ibid*, p.20). It seems that without an ongoing development and lifelong learning approach then one is not professional: 'Hence the need to be professional learners in order to become more effective learning professionals' (Eraut, 1994, p.14).

Attempting to separate professional from learning appears to create its own tensions where a dynamic relationship between the terms exists, with learning being no less complex a term than professional. There is extensive literature and wide variety of applications, interpretations, and definitions of learning, within which a useful beginning seems to be: 'Process of acquiring knowledge, attitudes, or skills from study, instruction, or experience' (Google Thesaurus accessed 28/10/2010). In adult professional learning the focus seems to shift from an accumulative process of acquisition towards a change process with an emphasis on the individual's personal responsibility to interact in some way with experiences. Within a constructivist approach there is a shift from an additive to generative model of learning:

First there is the notion that the cognitive structure is flexible with the potential always to change, sometimes without the addition of new material of learning from outside the person. Second the state of the cognitive structure at a given time facilitates the selection and assimilation of new material of learning (Moon, 2004, p.17).

If the learner has an awareness of the learning process this may equip them with the ability to improve or change their cognitive structure or problem-solving approach (Moon, 2004) and provide them with the flexibility to manage in more challenging situations. For as Schön identifies:

The paradox of learning a really new competence is this: that a student cannot at first understand what he needs to learn, can learn it only by educating himself, and can educate himself only by beginning to do what he does not yet understand (Schön, 1987, p.93).

Teacher-educators arrive at the introduction of the programme from a variety of professional positions and are often used to being in control of their own learning, the professional development of others and perhaps come with a personal construct of learning that may not identify with 'a focus on joint construction of knowledge, but also by the designation of the teacher as a member of the group of learners and by the role of the group in the learning experience' as posited by Peters and Armstrong (1998, p.79). Like the 'ideal-typical professionalism' (Freidson, 2001) the teacher-educator professional is

expected to not only teach, but also to be active in the codification, refinement, and expansion of the occupation's body of knowledge and skill by both theorizing and doing research (*ibid*, p.92).

This potentially creates a conflict between their experience of learning or professional development and the expectations of the teacher-educator role. Teacher experience of the roll out of the National Strategies suggests a top down, 'just do it' approach to professional development which 'failed to develop an embedded pedagogic rationale' (Bangs, Macbeath, Galton, 2011, p.88). This surface learning without the underpinning rationales and personal engagement is less powerful and less sustainable than the deep learning approach (Biggs, 1999). Whereas there is an implicit construct within the curriculum and pedagogy of the specific literacy intervention that the teacher-educators and teachers within this study are promulgating that places a value on changing conceptions through mutual constructions of knowledge leading to action. The cultural focus on change driven by a moral imperative to improve children's literacy learning finds echoes with Fullan's change theory and his emphasis on seven premises for theories of action with merit (2006). These are: 'a focus on motivation, capacity

building, learning in context, changing context, a bias for reflective action, tri-level engagement and persistence and flexibility' (*ibid* p.8). Each of these can be recognised and traced within the professional development model implemented within the professional Masters and professional learning context of this study at every level (Lyons, Pinnell, DeFord, 1993; Lyons and Pinnell, 2001). These seven premises can act together creating change but only if they are 'in the hands (and minds, and hearts) of people who have a deep knowledge of the dynamics of how the factors in question operate to get particular results' (Fullan, 2006, p.3), an argument for a deep learning and active engagement. This active engagement suggests a transformative approach to learning and development which I now discuss.

2.3 Transformative learning

In discussing transformative learning, I am influenced by the work of Mezirow, the originator of transformative learning theory (1978, 1981, 1991, 2000, 2009). Originally based upon interviews with women returning to study after a long break, his seminal work has influenced research and educational praxis focussed on adult learning. I have chosen Mezirow in preference to Kegan's theory of developmental consciousness (1994) because Kegan includes childhood whereas Mezirow focuses only on adult learning. In developing his theory of transformative learning Mezirow suggests that:

Transformative learning refers to the process by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind sets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action (Mezirow and Associates, 2000, p.7-8).

In the context of this study, transformative learning is important because despite the risk of a 'reification of transformative learning theory' (Taylor, 1997, p.56), it remains the predominant adult professional learning theory and has a substantial research and publication background (Mezirow, 1991, 2000; Taylor, 1997, 2007; Kitchenham, 2008;

Schugurensky, 2002; Snyder, 2008; Washburn, 2008). More specifically, Snyder draws upon Taylor to suggest that ‘studies looking at a specific aspect of transformative learning theory are beneficial in informing adult educators of ways to improve their professional practice’ (2008, p.174) which echoes with one of the aims of this study’s exploration of cognitive dissonance as an educative resource. The transformative nature of learning is both explicit and implicit within the professional development context of this study through an expectation that experience of observing and teaching behind the screen will trigger a process of change from previously held beliefs and understandings about children’s literacy learning and teaching to a deeper understanding and greater skill, perspective transformation. This change is based upon a generative rather than additive model of knowledge acquisition (Clay, 2001) and recognition of Mezirow’s ten stages of perspective transformation (1981) within a constructivist approach to adult professional learning (Perkins, 2006). The ten stages are:

1. A disorientating dilemma
2. Self examination with feelings of guilt, or shame
3. A critical assessment of epistemic, socio-cultural, or psychic assumptions
4. Recognition that one’s discontent and the process of transformation are shared and that others have negotiated a similar change
5. Exploration of options for new roles, relationships, and actions
6. Planning a new course of action
7. Acquisition of knowledge and skills for implementing one’s plans
8. Provisional trying of new roles
9. Building competence and self confidence in new roles and relationships; and
10. A reintegration into one’s life on the basis of conditions dictated by one’s new perspective (Mezirow, 1991, p.168-169).

The professional learning journey for literacy intervention professionals whether as teacher, teacher-educator and tutor, appears to resonate with these ten stages. This is not surprising as critical reviews of transformative learning studies (Taylor, 1997; Kitchenham, 2006; Snyder, 2008), identify an acceptance of Mezirow’s theory which has transformed the nature of adult professional learning and led to Washburn’s

assertion that: 'We understand what we are doing; we recognize transformative education when we see it- in all its guises' (2008, p.101). But these ten stages are not sufficient as Mezirow and subsequent refinements of his transformative theory posit, that there are three further requirements for transformative learning. These expect active engagement by the learner in: an appropriate context, self reflection and critical discourse (Snyder, 2008). In adopting Mezirow's theory of transformative learning, I am aware that it has been refined and developed since its inception in 1978 by a range of researchers (Cranton, 1996, 2006; Dirkx, 2009; Kitchenham, 2008; Poutiatine, 2009; Taylor, 1997). These developments extend its application and inform our understandings such that we are active participants in our own transformation. Rather than revisit Mezirow's theory through critique or meta-analysis, I choose to take the view that my focus is on cognitive dissonance as an educative resource and that transformative learning forms an important epistemological basis from which to explore since:

Transformation theory emphasises that people make an intentional movement in adulthood to resolve these contradictions and to move to developmentally advanced conceptual structures by transforming meaning schemes and perspectives through critical reflection (Mezirow, 1991, p.147).

Thus in the light of literature I have chosen to adopt Mezirow's transformative learning theory and to accept the challenge from critiques by Taylor (1997), Schugurensky (2002) and Snyder (2008) to ensure that my exploration of cognitive dissonance within a framework of transformative learning includes examinations of critical reflection, emotion and environment on my journey towards a deeper understanding of the process rather than the level. This is not to dismiss alternatives perspectives on transformative learning but to start from an identified position and then to draw upon and interweave the aspects that are most 'fit for purpose'. In doing so I am problem-solving whereby 'problems of choice or decision are solved through the selection, from available means,

of the one best suited to established ends' (Schön, 1983, p.40), in this case, 'best suited' for providing a framework in which to explore cognitive dissonance within adult professional learning. To that end I discuss how transformative learning is realised within my identified professional development praxis and how that relates to my exploration of cognitive dissonance.

One of the challenges for researchers of transformative learning is how to capture and measure it in some way (Snyder, 2008). Another challenge is to define transformative learning and Poutiatine (2009) offers nine principles to identify the transformational process, specifically in leadership. These are helpful to this study as the challenge of defining transformative learning mirrors the challenge of defining cognitive dissonance and the teacher-educators and their teachers are all leaders in some manner. They might be leaders in literacy within the school, leaders of literacy intervention teachers as teacher-educators or as tutors, members of the University professional Masters tutor team and responsible for quality assurance across the teacher-educator professional learning community.

Poutiatine's Nine Principles of Transformation (2009, p. 19 2)

1	Transformation is not synonymous with change
2	Transformation requires assent to change
3	Transformation always requires second order change
4	Transformation always involves all aspects of an individual's or organisation's life
5	Transformational change is irreversible
6	Transformational change involves a letting go of the myth of control
7	Transformational change always involves some aspect of risk, fear and loss
8	Transformational change always involves a broadening of the scope of worldview
9	Transformation is always a movement towards a greater integrity of identity – a movement towards wholeness

Table 2:1: Poutiatine's Nine Principles of Transformation

To state that transformation is not the same as change, at one level sounds obvious, at another conflicting. In the literacy intervention initial professional development programme, teachers' change their teaching procedures after learning about a theory of

literacy acquisition based upon continuous text (Clay, 2001, 2005) but whilst the procedures may be different this is not transformation in that it is surface learning (Biggs, 1999). When teachers take those teaching procedures and apply them with a deep understanding of the theory of literacy acquisition which underpins those procedures and tailor the application to meet the specific, changing and individual needs of their children (Clay, 2001), then their teaching is transformed. For many literacy professionals the very act of becoming part of the literacy intervention professional learning community is a conscious decision about their career path. For some it is about maintaining their connection with children rather than moving into management and away from teaching. For others it is about becoming a leader and using their expertise as an agent of change (Fullan, 2004). Few professionals withhold support when they experience and see the results of change for themselves. This is what happens in the literacy intervention focussed on by this study, some enter perhaps confident of their ability but keen to take the next step on a career ladder or leadership pathway. The impact of the intervention lesson series on their struggling learners confirms their assent to change and enables them to feel confident that their assent will have an impact wider than that of the four children they teach daily (Clay, 2005). Once a literacy professional has made the commitment and engaged in the programme at whatever level then it results in lasting changes in their lives (ECRR, 2011). But change and more specifically, transformation requires risk (Darling-Hammond and McLaughlin, 1995). Risk is a double-edged sword in education. On one hand we recognise the importance of risk taking as part of creativity and we talk about 'good readers being risk takers'. We seem to believe that choosing between alternatives, making decisions with the accompanied risk of making the wrong choice or decision is an important part of being a successful learner. Successful learners take risks and are successful but poor learners take risks and are unsuccessful leading them to reduce their risk taking and to become

less successful still, a type of Matthew's effect (Stanovich, 1986). This seems to create a tension. It is one that affects adult learners particularly (Argyris, 1974). The literacy professionals are successful expert teachers with little if any experience of professional failure. In undertaking the intensive literacy intervention professional development they are putting themselves in a learner situation and potentially a risk taking position. They risk failure at teacher level in not implementing the literacy intervention lesson series successfully to meet the needs of the children they teach, despite being successful teachers in the past. They risk failure as an adult learner; being a student, submitting work, attending lectures, contributing to discussions and completing a Masters award. They also risk failure in the teacher-educator role by not being able to move from their current construct of early literacy teaching and learning and into the role of a teacher-educator and the specific responsibilities and facilitation of adult learning that this requires. The risk is both professional and personal, potentially impacting on identity (Warin et al., 2006, Galman, 2009). Without risk, and the potential for experiencing fear and loss, there cannot be success in this context. Transformation theory offers a way forward for these professionals:

Transformative learning is a rational, metacognitive process of reassessing reasons that support problematic meaning perspectives or frames of reference....It is the process by which adults learn to think critically for themselves rather than take assumptions supporting a point of view for granted (Mezirow, 2009, p.103).

Both Poutiatine and Mezirow argue that in transforming meaning perspectives there is a broadening of the worldview. My experience of teacher-educators resonates with that view (Ince, 2010). The expanded world view is also part of the letting go of Poutiatine's myth of control (2009). The construction of knowledge and understanding is a complex process of which the learner is not always in control. The sense of loss of control leads to a tension which provides a location for cognitive dissonance to develop and in which to seek a resolution. I now discuss cognitive dissonance, starting with a discussion of

literature and developing an argument for its use as an educative resource in adult professional learning.

2.4 Cognitive dissonance: from chaos to coherence

Coherence is what we, as humans, strive for since it is the outcome of dissonance reduction and allows us to remain in our comfort zone (Festinger, 1957). As discussed in Chapter one, cognitive dissonance is created when we are confronted or forced to face new information that challenges our existing constructs. Working through the challenges to reduce cognitive dissonance is a powerful learning process (Fullan, 2004; Galman, 2009; Ince, 2010).

The most powerful coherence is a result of having worked through the ambiguities and complexities of hard-to-solve problems (Fullan, 2004, p.167). Achieving coherence is not easy and for many learners is very challenging with uncomfortable experiences which seem to undermine their sense of being. Enabling and supporting these learners to work through the complexities and ambiguities that Fullan identifies, whether these relate to learner identity or ways of learning is important for facilitators and has been the focus of studies involving cognitive dissonance.

2.4.1 Identity dissonance

Being a learner as well as an education professional introduces risk and challenges previously held beliefs as discussed in Chapter one. These risks and challenges may be both personal and professional, impacting on individuals' identity as well as their practice. However, problem-solving these challenges and resolving any dissonance is an important part of becoming a teacher-educator (Galman, 2009). The professional Masters programme that is the context for this study recognises the challenges. Figure 2.1 shows how the change in identity might operate through a combination of planned experiences, for example field work, lectures, plus critical incidents (often as a result of a teaching interaction with a child) and reflective practice. These occur within the

interrelated learning areas of child, self and adult learning. Cycles of these experiences throughout the programme lead participants to a reconstituted professional identity as a teacher educator.

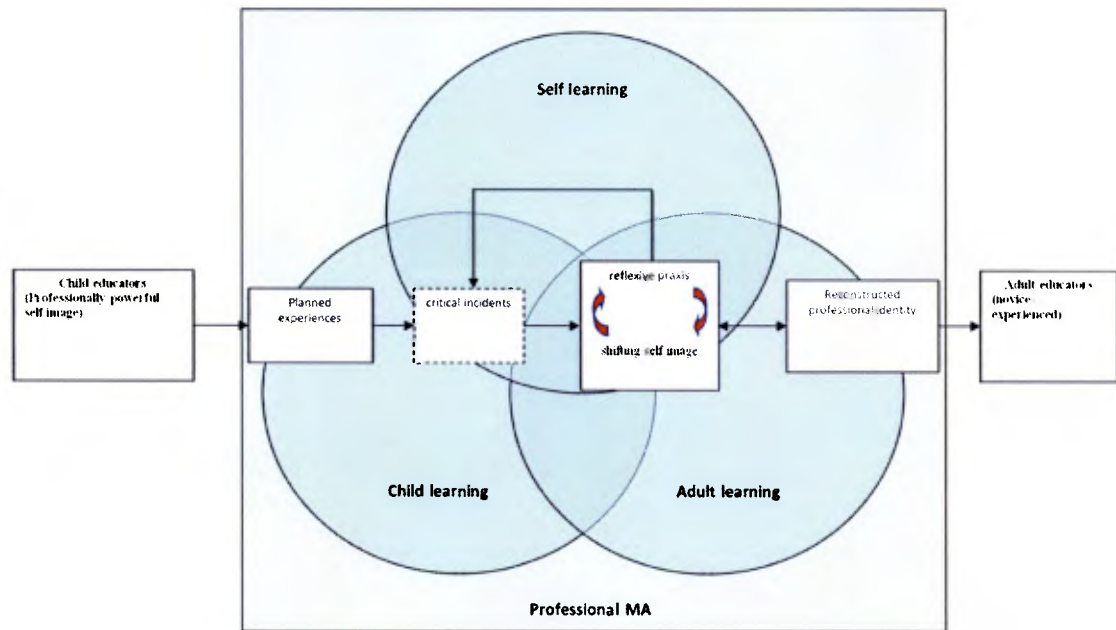


Figure 2.1: Identity shift for participants on Professional Masters (Taylor and Ince, 2012b after Taylor, 2003)

Warin et al. (2006) discuss the ‘psychological discomfort that can be felt when a person is aware of disharmonious experiences of self’ (p.237). Resolving this discomfort could be interpreted as Festinger’s ‘activity towards dissonance reduction’ (1957, p.3).

Galman suggests that it is not quite as simple. Instead she identifies ‘bi-directional dissonance that is a catalyst’(2009, p.470) which results in two possible outcomes, either working through identity development to resolve the dissonance or being unable to wrestle with the challenges and leaving the situation that has created the dissonance.

These outcomes might be recognised as Cano’s two types of dissonance which he characterised as positive and negative dissonance (2005). Ince (2010) proposed three outcomes from a dissonant experience: (i) confirmation of previously held beliefs, (ii) denial or rejection and (iii) engagement with cycles of critical reflection to resolve the

dissonance leading to new learning. These three outcomes, illustrated in figure 2.2, could be interpreted as echoing Galman (2009) and Cano's (2005) findings where 'confirmation of previously held beliefs' acts as an amalgam of Cano's basic and complex consonance, and 'denial and new learning' are negative and positive dissonance resolution respectively.

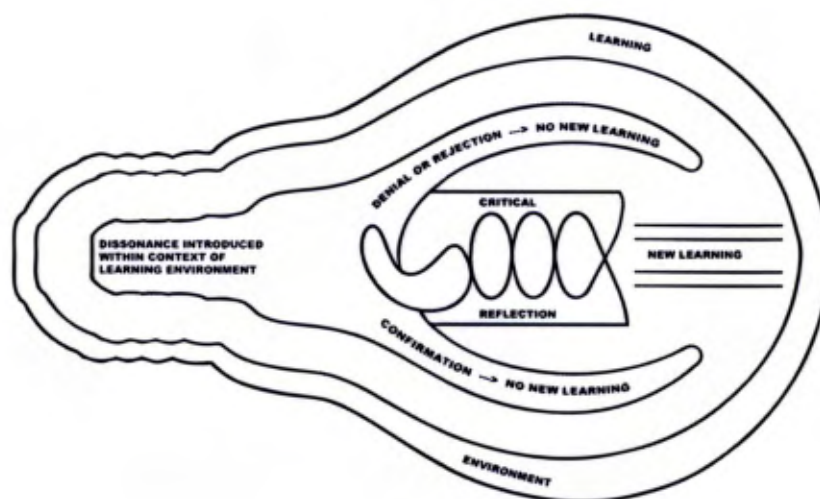


Figure 2.2: Three outcomes from a dissonant experience (Ince, 2010)

Galman's study focussed on dissonance experienced in the development of teacher identity but she also noted that for some learners, perceptions of lack of coherence between expectation and experience within their programme either created dissonance or offered an external explanation for their discomfort, potentially reducing the need for resolution. Galman's observation recognises an important area of study into cognitive dissonance which literature identifies as study orchestration and which I now discuss.

2.4.2 Study orchestration, consonance and dissonance

A mismatch is one way of describing cognitive dissonance. That mismatch might be between expectations and experiences on a programme of study or between ways of learning and ways of teaching. Meyer and Shanahan suggest that 'dissonance may also

be exhibited in mismatching learning engagement with the contextual demands of that engagement' (2003, p.5). They develop Meyer's work on dissonance as an 'interference model' and discuss location and structural dissonance using memorising and repetition as learning processes (Meyer and Shanahan, 2003). They adopt a quantitative approach to exploring dissonance whereby:

'Location' refers here to measures of central tendency (means, modes, medians) while 'structure' refers to differences in more complex relationships between observables as exhibited in a correlation or covariance matrix (2003, p.8).

My interest is less about the location and structure and more about the interplay between learners and their experiences and how these might be recognised as cognitive dissonance. So Meyer's 'mismatch' might be alternatively conceived as 'friction' which Vermunt and Verloop (1999) describe as the mismatch between student and learning environment. I find the notion of 'friction' more apposite than 'mismatch' because it suggests a close interplay between elements, whereas 'mismatch' feels more objective and distant. I argue that perhaps these variations in descriptive terminology reflect a continuum of cognitive dissonance from mismatch towards friction and that an experience becomes cognitively dissonant for an individual at different points along that continuum according to personal perceptions and experiences, with friction becoming the point at which the individual feels the need to resolve the discomfort. Lindblom-Ylänne in her work with Law students on 'Broadening an Understanding of the Phenomenon of Dissonance' suggests that

Dissonance is an extremely interesting phenomenon because in addition to pointing out theoretically atypical combinations of different approaches to learning, it reflects problematic relationships between individual students and their learning environments, particularly their perception of environments (2003, p.64).

Coherence between expectations, congruence between perceptions and reality all enable learners to feel comfortable about their situation. Being within one's comfort zone

sounds attractive but as Fullan states ‘disequilibrium is common and valuable provided that patterns of coherence can be forested’(2004,p.166). It is the patterns of coherence, be that of identity or within study orchestration, or frictions experienced in their learning environment that are the foci for many studies investigating cognitive dissonance. How individuals shift from experiencing lack of coherence in their schema created by cognitive dissonance towards resolution or coherence is characteristic of Festinger’s dissonance reduction (1957). Literature suggests that it is the process of the dissonance reduction rather than the discomfort per se that is the learning opportunity. Fullan expresses this as ‘unsettling processes provide the best route to greater all-round coherence’ (2004, p.167). Critical reflection offers a way for learners to work through the discomfort and unsettling processes that seem to characterise cognitive dissonance and the possible learning opportunities. Managing this reflective process seems a rich source of insight for considering cognitive dissonance as an educative resource for facilitators and individuals. The next section explores how critical reflection can be understood and applied to this context.

2.5 Critical reflection

Mezirow explicitly discusses critical reflection within his transformative learning theory and it is recognised and valued by subsequent researchers defining it as: ‘The central dynamic in intentional learning, problem-solving, and validity testing through rational discourse’ (Mezirow, 1991, p.99). He suggests three types of reflection; content, process and premise. Content reflection is reflection on what we think, feel, perceive; process reflection is how we think, feel, perceive something, and premise reflection is the awareness of why we feel, act, perceive as we do. He draws attention to important differences between learning that lacks a reflective component and transformative learning. In doing so Mezirow locates a reflective stance and activity at the heart of his transformative learning theory:

Reflective learning involves the confirmation, addition, or transformation of ways of interpreting experience. Transformative learning results in new or transformed meaning schemes or, when reflection focuses on premises, transformed meaning perspectives. Not all adult education involves reflective learning; however, fostering reflective and transformative learning should be the cardinal goal of adult education (Mezirow, 1991, p.117).

The term 'critical reflection' is becoming problematic and potentially suffers from over application. It has shifted its interpretation away from Dewey's definition of reflective thought as 'active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends' (1910, p.9). More recently reflection has been discussed as an element of change in adult learning (Schön, 1983, 1987; Mezirow, 1981, 1991; Brookfield, 1987; Cranton, 1996, 2006). Hatton and Smith (1995) explored the tensions that the term creates and suggested 'deliberate thinking about action with a view to its improvement' (p.39) as a definition followed by a developmental, though not necessarily consecutive or incremental, model of five types of reflection from technical rationality to reflection in action via descriptive, dialogic and critical reflection. This work drew upon that of Schön (1987) who discussed the importance of reflection in order to effect changes in practice. Schön (1987) suggested that adults may talk about what they do but that evidence suggests that they do something different. However, once they receive feedback that alerts them to this they can begin to shift towards congruence between their theory in use and espoused theory (Schön and Argyris, 1974). Schön (1987) further suggests that professional education should provide professionals both with the skills for their profession but also the ability to reflect on and in action. His work might be seen as an exploration of reflective practice and incorporates ideas about intuitive reflection on action. Reflection was adopted and incorporated by Brookfield (1987) into two of his six key principles of adult education. He saw it as an integral part of praxis whereby participants are engaged in a constant cycle of activity and reflection upon

activity. Brookfield also suggests the fostering of critical reflection so that participants are encouraged to consider alternative views, challenge assumptions and to explore the “what ifs” of each (*ibid*, 1987). His focus moves us away from the concept of reflection itself and into a much needed understanding of its application and use in adult learning.

The application of reflection within adult education and the implications for educators is furthered by Cranton (1996, 2006). She developed Mezirow’s (1991) ideas about transformative learning together with Brookfield’s (1987) applications claiming that:

...educator development that incorporates critical reflection results in educators articulating the assumptions that underlie their practice, determining the sources and consequences of those assumptions, critically questioning the assumptions and imagining the alternatives to their current perspective on practice (Cranton, 1996, p.93).

The inclusion of ‘critical’ when discussing reflection is an important addition since it involves a shift from reviewing to critiquing which is ‘seen as a conscious and explicit reassessment of the consequence and origin of our meaning structures’ (Taylor, 2008, p.6). Questions which challenge or opportunities for alternative viewpoints support a shift from reflection to critical reflection. More recently, Hodge and Chandler (2010) posit that reflection as part of an approach to teaching enables professionals to be creative, extend their understanding, improve praxis and increase their ability to respond to new challenges. Thus the value of reflection within professional learning emerges across the literature and in specific contexts. These perspectives on the importance of reflection share some features. They are all contextually grounded in that they are discussed within particular situations, such as education and programmes of study, the professions and learning environments. They all seem to agree that reflection on its own is insufficient and that it requires a feed forward so that it leads to learning and or supports action in the future in some way. Particular conditions for reflection such as time, the learning environment, motivation are further posited by Cranton, 1996; Day, 1993; Schön, 1987; Williams, 2001; with Taylor (2008) suggesting that reflection is a

developmental process. Day sums up this discourse in stating that: 'reflection is a necessary but not sufficient condition for professional development' (1993, p.83). Those that dispute its place focus on cognitive aspects and the lack of emotional connection with Mälkki (2010) developing a theoretical framework that combines Mezirow with Damasio's neurobiological approach. Whereas Jordi (2010), sees the concept of reflection as requiring rehabilitation and he sets out nine elements in reconceptualising reflection. These elements seem to resonate with a constructivist approach whereby surfacing and animating (Perkins, 2006) is important and yet Jordi makes the point that reflection is more than cognitive and rational and he too suggests a more cohesive approach which marries cognition with emotion in our conceptual understanding of critical reflection. I suggest that it is not possible to artificially disconnect learners from emotional responses linked to their experience and any disorientating dilemma. Instead critical reflection acts as an enabling agent for learners to tussle with cognitive dissonance and by engaging in cycles of challenge and reflection work towards dissonance reduction and transformation (Taylor and Ince 2012a). However, for the most effective outcomes there needs to be skilled facilitation within a secure environment and it is these aspects that I now discuss.

2.6 The role of the facilitator

The role of the facilitator is a crucial one in complex adult professional learning. A facilitator may be interpreted as someone who makes it easy for something to happen or who eases the way for someone. In some respects that is helpful; the role of facilitator often involves taking certain responsibilities on board to relieve the learner so that they can concentrate on what is important in the learning. The possible danger is that the learner becomes passive and relies upon the facilitator to make the links, provide the understanding as well as the context, resources and opportunities. An alternative that I prefer is the concept of an informed guide. One that helps to create the learning

environment but is not in charge, and rather fosters a sense of a learning community (Wenger, 1998) enabling learners to take responsibility for their own actions, understandings and change. But within the complex world of adult professional learning there are clear roles and responsibilities. To discuss these roles I have adopted the four criteria for a constructivist approach to learning from Baviskar, Hartle, and Whitney, (2009) as prompts, since this study's literacy intervention praxis operates within a constructivist epistemology. The four criteria are: eliciting prior knowledge, creating cognitive dissonance, application of the knowledge with feedback and reflection on learning (*ibid*). I begin with the role of reflection. Critical reflection appears to be a routine part of many current programmes of study across a range of disciplines, manifested in the writing of journals, e-journals and particular approaches and tasks (Cranton, 1996; Boud, 1995; Williams, 2001). It is the role of the facilitator to introduce these reflective opportunities and to enable the learners to gain from these opportunities.

The particular function of the facilitator is to challenge learners with alternative ways of interpreting their experience and to present to them ideas and behaviours that cause them to examine critically their values, ways of acting and the assumptions by which they live (Brookfield, 1986, p.23).

From a practical perspective this might be interpreted and implemented through critical questioning, as a process for resolving learning dissonance, and the use of critical incidents as foci for discussion, possibly supported by the use of reflective journals (Williams, 2001; Hodge and Chandler, 2010). However, as Day (1993) suggested it seems that opportunities for reflection and being asked to reflect may not always lead to the critical reflection at the necessary level and depth for change to occur, suggesting that there is something within the role of the facilitator that enables some to manage this process effectively and for deep learning (Biggs, 1999) to occur. Cranton suggests the facilitator:

...responds to the needs of the learners, fosters a meaningful group process, provides support and encouragement, builds a trusting relationship

with learners, helps challenge peoples' assumptions and beliefs, and accepts and respects learners (2006, p.105).

This recognition of the challenge of previously held beliefs and assumptions echoes Brookfield (1987) and extends the constructivist concept of eliciting prior knowledge. It is important as part of valuing the learner's previous experience and contribution but goes further through the 'surfacing and animating' of knowledge and understanding (Perkins, 2006, p.40) which then enables challenge. Mezirow (1991) argues for the importance of challenging our assumptions at two levels. First, the re- examination of previously held views as part of the process of transforming meaning schemes, which he states as integral to the process of reflection and the dynamics of reflective learning. Second, the possibility of finding our basic premises challenged through a 'disorientating dilemma' (1991, p.192) which may lead to major changes in how we view the world and thus engender perspective transformation. For assumptions and beliefs to be challenged either personally or by others, a situation that offers alternatives in approach, belief, or perspective together with a supportive environment is required.

Another role for the facilitator:

....that adults will frequently be challenged by educators and fellow learners to consider alternative ways of thinking, behaving, working, and living. But this challenging of others' ideas and attitudes and this prompting of analysis of one's own behaviours and beliefs must occur in a setting where dissension or criticism of another does not imply some kind of personal denigration (Brookfield, 1986, p.13).

Being able to move beyond what might be perceived as personal criticism of an individual into the principles underpinning the behaviours, views, and understandings may be difficult, especially for experienced professionals. There is potential for the personal investment by the individual in the learning experience to cloud their ability to differentiate between Brookfield's 'personal denigration' (*ibid*) and constructive criticism. The opportunity to have meaningful feedback directly related to the needs of the professional and their future growth relies upon the pedagogy of the programme and

tutor facilitation. The 'critical friend' (Lyons, Pinnell, and DeFord, 1993) is a powerful model and one which Osterman and Kottkamp express as 'the facilitator is not a superior assessing performance quality but a collaborator stimulating professional growth in a way consistent with the needs of the individual' (1993, p.179).

Collaborative learning offers both the opportunity for professional growth, and supports the development of self concept in the learners. It suggests a constructivist approach to learning whereby:

Collaborative groups are important because we can test our own understanding and examine the understanding of others as a mechanism for enriching, interweaving and expanding our understanding of particular issues or phenomena....The second role...is to develop a set of propositions we call knowledge. We seek propositions that are compatible with our individual constructions or understanding of the world (Savery and Duffy, 1995, p.2).

The influence of collaborative working and the power of creating our own truths, constructed from shared understandings place a responsibility upon the facilitator so that within the learning environment members are able to discuss, challenge and contemplate their own constructs and the observable tensions that might arise from shared experiences within the group. Argyris and Schön set out this responsibility as:

The instructor should first create a learning environment in which individuals produce the behaviour from which they begin to learn. The behaviour should be of two types: behaviour that the participants feel is congruent with their values yet produces consequences that they did not expect; and behaviour that participants feel exhibits theories-in-use that are incongruent with espoused theories (1974, p.98).

This notion of congruence echoes with another role for the facilitator. In research on study orchestration and dissonance (Prosser, Ramsden, Trigwell and Martin, 2003) congruence between the facilitator's beliefs and delivery had an impact upon student outcomes with deep learning occurring with congruence. This seems to suggest that the facilitator also needs to consider whether the methods, approaches and tasks they use are congruent with the higher outcomes they plan for their students. Further, studies by

Cano (2005); Wisker, Robinson, Trafford, Creighton, Warnes (2003); Boulton-Lewis et al (2003); Long (2003) suggest that congruence between the students' expectations, learning style, and that of the learning experience or programme pedagogy is required. Potentially this places a burden upon the facilitator. They need to be aware of the source and nature of any incongruities, self aware of their own perspectives, familiar with the curriculum and pedagogy of the programme so that they can flexibly and creatively meet the needs of the learners whilst simultaneously creating the greatest opportunities for the students to learn (Baviskar, Hartle, and Whitney, 2009). However, the responsibility is not solely that of the facilitator. As Perkins (2006) makes clear both parties have choices within the learning process and to engage in cognitively demanding challenges may not be attractive for all learners. A pragmatic approach to constructivism suggests the facilitator creates a learning environment such that incongruities and possible sources of dissonance are managed so that they become learning opportunities not barriers to progress or as Perkins suggests: 'The best constructivist teaching becomes an art of intellectual seduction, luring students into learning in ways deeper than those to which they might be disposed' (2006, p.45). Creating an 'intellectually orientated learning environment' (Roskos and Bain, 1998, p.98) is perhaps a more comfortable role description for the facilitator than 'seduction' but the ability to create a positive learning environment plays an important part in engaging learners and has the potential for substantial impact upon learning. Throughout literature the role of facilitator is recognised as complex and demanding, but common responsibilities towards the learner, pedagogy and curriculum goals of the programme are also identified. The facilitator role is also clearly located within the learning environment through a symbiotic relationship which I now explore.

2.7 The learning environment

The concept of a learning environment might be problematic according to one's epistemology. At a practical level professional development can become more accessible and moves away from the previous strictures of classrooms. The traditional view of a classroom as the learning environment has been very much expanded to include the emotional aspects of learning and to encompass the affective domain. The very idea of a classroom itself is undergoing change. Virtual learning and e-learning mean the physical attributes of a learning environment are less important, whereas a climate for learning is more so. 'For educators this means the learning environment is not simply the location of learning, as widely construed but the set of conditions that enable and constrain learning' (Brown, 2009). Thus the learning environment becomes the setting for the cognitive construction, critical analysis and problem-solving which are crucial to the learning process. I argue it is the role of the facilitator to support the creation of a learning environment and an affective domain such that it is 'from this zone of safety that individuals become more capable of taking the risk to examine their existing frames of understanding and ask hard questions of themselves' (King, 2005, p.32). The re-evaluation of beliefs and understandings is not comfortable; it requires a certain amount of motivation and preparedness to take risks. The role of the facilitator then becomes one of managing the environment so that it supports challenge and risk taking, an essential component of professional learning. However, it is not the sole responsibility of the facilitator to create this learning environment. Instead from a social constructivist approach (Kroll, 2004) each individual member within the learning environment has a responsibility and value to contribute within and to the group. So it is less about an expert and a facilitator as leader and more about the dynamics among group members to create a purposive environment of mutual respect and trust in order to gain the most from the learning opportunities.

Environments that reinforce the self concepts of adults, that are supportive of change, and that value the status of learner will produce the greatest amount of learning (Brookfield, 1986, p.29).

Identifying what this environment might look like is more challenging as whilst literature provides suggestions about what the environment should promote, how this is interpreted is somewhat individual and sits within epistemological praxis. Roskos and Bain (1998) posit five features for a learning environment that promotes intellectual engagement: permission for thinking and studying, models of thoughtfulness present in the environment, access to superior mediation, maintaining a focus on learning and acknowledging barriers to thoughtfulness. Literature suggests there is a focus on what is required rather than the how to achieve such an environment and the role of facilitator is crucial to the 'how' of creating a positive learning environment. The learning environment is dynamic and the relationship with the facilitator central to the effectiveness for the learners. This relationship raises tensions between the roles of the facilitator within the learning environment. Firstly to create a safe environment where individuals are valued and feel able to take risks with their learning; secondly and perhaps both more importantly and counter intuitively, to challenge learners by introducing disorientating dilemmas creating cognitive dissonance with the aim of enabling transformation.

2.8 Summary

This chapter has provided definitions of key terms, and discussed professional learning, transformative learning, cognitive dissonance, and critical reflection as prisms through which to explore cognitive dissonance and to locate this study within its literature. The role of the facilitator and the learning environment are discussed as ways of grounding the study in praxis. I have identified a gap within the field of study that offers the opportunity to contribute new understandings. This gap echoes Snyder's (2008) call for further research into the process of transformation theory:

Curriculum designers, might assume that participants enter programs or classes with a pre existing disorientating dilemma or that the program might prompt a disorientation dilemma. If this does not happen, then the participant is not primed for transformation. This points to a difficulty in the transformative learning literature- lack of attention to the affective domain (Snyder, 2008, p.171).

By focussing on how facilitators use cognitive dissonance within the complex adult professional learning environment of literacy intervention professional development I aim to respond to this challenge and that of Taylor who asks:

Despite this more in-depth research into the catalyst of transformative learning, there is little understanding of why some disorientating dilemmas lead to a perspective transformation and others do not. What factors contribute or inhibit this triggering process? (2008, p.45).

My explorations of the concept of cognitive dissonance in learning included considering what is known of the role of the affective domain in this context. This study aimed to provide a deeper exploration of the role of cognitive dissonance as an educative resource in complex adult professional learning in a grounded and theoretical response to the challenges of Taylor and Snyder. This aspiration informed the decisions taken about design, methods and research approach which are discussed in Chapter 3.

Chapter 3:

Decisions, decisions: study design and methods

3.1 Introduction

This study explored cognitive dissonance within complex adult professional learning to create an articulation of the features of cognitive dissonance, whereby cognitive dissonance might be more readily recognised by facilitators and utilised as a tool for transformative learning (Mezirow, 1991). The research questions are:

- How might cognitive dissonance be more readily recognised or identified by facilitators within complex adult professional learning?;
- How do facilitators of such learning utilise cognitive dissonance within a constructivist approach to learning (Kroll, 2004) to encourage and facilitate transformative learning (Mezirow, 2009)?

Firstly, I locate my position as a researcher before moving to explain the design of the study, to describe the context, participants and data collection strategy with rationales for decisions made. Ethical issues are discussed followed by data analysis within the theoretical perspective of ‘grounded theory’ (Corbin and Strauss, 2008).

3.1.1 A personal epistemology

This study did not set out from a positivist stance to find the ‘objective truth’ (Crotty, 1998, p.9) about cognitive dissonance, instead the aim was to satisfy a personal and professional curiosity and in doing so explore and contribute to theory development and construction through an inductive approach. Working through the ambiguities and complexities (Fullan, 2004) of the real life problem of characterising cognitive dissonance and in understanding how best it might be utilised as an educative resource is not a clear cut situation that can be technically rationalized in the positivist stance.

Instead it seems to be located in the ‘swampy lowland where situations are confusing messes incapable of technical solution’ (Schön 1983 p.42). Schön’s description resonates, seeming to recognise the complexity of professional learning, as well as the problem-solving nature of researching a complex phenomenon such as cognitive dissonance. He states: ‘There are those who choose swampy lowlands. They deliberately involve themselves in messy but crucially important problems’ (*ibid* p.43). I interpret this as reflecting the nature of educational research which is situated in the reality of social interactions and events so that the ‘task of the researcher is to understand the multiple social constructions of meaning and knowledge’ (Robson, 2011, p.24). My previous experiences, education, and professional development have led me to adopt a constructivist approach whereby ‘a learner is believed to construct, through reflection, a personal understanding of relevant structures of meaning derived from his or her action in the world’(Fenwick, 2000, p.248). Active engagement in the learning process and the creation of meaning through social construction underpin my understandings. Therefore I am not inclined to search for an absolute in this context, but rather to explore the role of dissonance as an educative resource within advanced professional learning. This approach and aim has implications for my choices and the decisions made regarding design and data analysis which I now discuss.

3.2 Design of the study

I adopted a flexible, qualitative approach underpinned by my social constructivist epistemology (Kroll, 2004) leading to a multiple case study design with the potential to support theoretical generalization (Robson, 2011). Each case was one professional development (PD) session at a centre which included two literacy intervention lessons observed through a one way mirror, known as the ‘screen’. I selected this design because ‘a case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries

between phenomenon and context are not clearly evident' (Yin, 2009, p.18). In this study, the phenomenon is cognitive dissonance. I located my study in the real life context of the complex adult professional learning that occurs in a specific early literacy professional development programme. A professional Masters programme at the Institute of Education, University of London prepares expert literacy teachers to become teacher-educators. To make this transition, and because these literacy experts cannot be prepared for every eventuality, the goal of the programme is that they become generative learners (Taylor and Bodman, 2012). The programme explicitly and actively promotes cognitive dissonance as part of the learning process (Taylor and Ince, 2012a). Cognitive dissonance is achieved through the use of readings, workshops and explicit discussion supported by handouts (see appendix 1). Programme readings are chosen which will introduce learners to potentially new ways of thinking about established concepts in early literacy acquisition or teacher development and which may challenge personally held constructs. Behind the screen facilitators model and demonstrate tentative hypothesising based upon observation for problem-solving (Figure 1.2). Facilitators use questioning to build cycles of talk (Appendix 1) and to lift the level of understanding, often by identifying mismatches between what is observed and understood by learners and they explicitly describe these mismatches and challenges to learners' constructs as cognitive dissonance. These experiences on the programme are supported by simultaneous field work where learners shadow experienced teacher-educators in the field and observe how they work with their learners behind the screen. The teacher-educators also use the term "cognitive dissonance" with the observing learners to discuss their facilitation decisions after the PD sessions and learners bring their field notes and experiences to sessions for discussion and critique feeding forward into reflective accounts as part of assessed coursework (Ince, 2009). All participants

within this study had undertaken this professional Masters programme and were working in the field as teacher-educators or were completing their studies.

For the purposes of this research I chose to adopt and adapt Gilham's (2000) definition of a case whereby 'it is a unit of human activity embedded in the real world, can only be studied or understood in context which emerges in the here and now that merges in with its context so that precise boundaries are difficult to draw' (p.1). The choice of case study was informed by Yin (2009), since my focus was on 'a contemporary phenomenon within a real life context' (p.2). In this study that meant each case was one professional development session with two lessons observed through the screen. The focus for the each case was behind the screen observation and critique of live lessons as an example of complex adult professional learning. In that distinct environment, teacher-educators lead a group of early literacy teachers, either in their training year, or subsequently in continuing professional development (CPD) to critique the teaching interactions as they occur behind the screen with the aim of generating hypotheses.

Teachers are provided opportunities to analyze and discuss specific actions and behaviours while at the same time conducting intensive reflections and holding conversations about the teaching and learning process they are observing (Lyons, Pinnell, DeFord, 1993, p.43).

Similarly, tutors leading the professional Masters programme facilitate aspiring teacher-educators to observe and critique at the screen. The rationale was that the observed behaviours of the group, teacher-educator and lesson participants would yield insights leading to inference of the thinking behind them triggering reflections and moves toward transformative learning (Mezirow, 1991), with the potential for identifying features of cognitive dissonance.

The choice of design was further influenced by the findings of other researchers in this field who noted that 'dissonance was found only when qualitative research methods were used' (Lindblom-Ylänne, 2003, p.65). This may be attributed to the identified

draw backs around instrumentation used, and statistical analysis aspects of quantitative methods as applied to cognitive dissonance (Meyer and Shanahan, 2001), such as have been used in a range of studies investigating this phenomenon. According to Yin (2009) the case study approach offers four applications: explanation, description, illustration and enlightenment. In adopting a multiple case study design I used qualitative data from the cases to develop (i) a description of cognitive dissonance to support facilitators and (ii) used examples from the data for illustration and (iii) proposed insights towards enlightenment about cognitive dissonance as an educative resource. The study used multiple cases, four in total. Each case was a pair of lessons, eight in total, observed behind the screen as an opportunity to explore the concept of cognitive dissonance as it might be played out in complex adult professional learning within these professional development environments. This flexible, multi-method design supported triangulation of data sources (Flick, 2006) was adopted as strategic in reducing potential researcher bias (Gilham, 2000) and interpretability (Robson, 2011). Furthermore, the multiple case design provided rich data enabling the study to be more descriptive than explanatory (Edwards and Talbot, 1999) and more suited to investigating my research questions.

3.3 Case context

The professional development model which formed the context for this study is predicated upon tiers of scaffolding learning (Gaffney and Anderson, 1991).

Participants are required to teach children daily on a one to one basis, and attend regular professional development sessions for as long as they remain professionals within that field. The professional development sessions are led by teacher-educators. These teacher-educators are experienced literacy experts who have undertaken the professional Masters at the Institute of Education, London University (IOE). This includes teaching children, shadowing experienced teacher-educators and working with University tutors on a weekly basis interweaving theory and practice. A unique aspect of the professional

development programme at every level is the use of a one-way screen, (RRNN, 2006) to observe teacher-child interactions. At each professional development session there are always two lessons behind a one-way screen. Teachers led by the teacher-educator or tutor observe and discuss the interactions between teacher and child in real time.

The participants sit side by side in darkness in two rows of stools looking intently through a one way screen to actively observe the teaching interactions of teacher and child on the other side. The participants are led by the facilitator who stands to one side observing the group and monitoring what is being observed. In this physical environment individuals will be able to observe slightly different aspects of the same shared lesson due in part to their physical position in relation to the screen. The differences might be subtle but they allow acute observation of tiny details which when shared contribute to a more developed picture. These might include, for example, being able to comment on a pupil's eye movements or the particular word in print the interaction is focussing on behind the screen. Those perhaps less able to see this level of detail clearly might be able to contribute observations about the interactions, body language, tone, and intonation and so on. Figure 3.1 shows an example of the typical physical environment during observations shared by participants in this study.

These sessions occur regularly with the teacher-educator using the lesson observation to build understandings about early literacy, individual children and teaching interactions.

The regularity of sessions (fortnightly) potentially provides more opportunities, through frequency of experience to utilise cognitive dissonance as an educative resource.

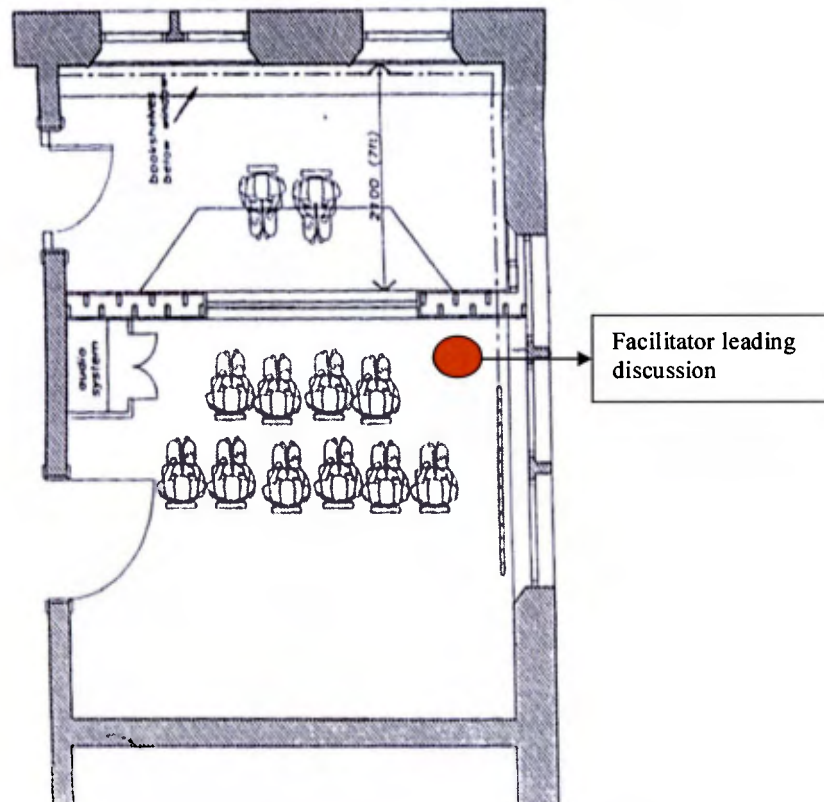


Figure 3.1: a typical layout of an observation session RRNN (2006)

When teachers are more experienced the teacher-educator moves to fewer sessions (usually six across an academic year) and may take a more provocative stance in leading the discussion, aiming to challenge understandings and induce more cognitive dissonance within the group through the use of ‘verbal challenge’ and invitation to express alternative views:

A central process within the in-service course is verbal challenge. The leader’s role is to challenge teachers to make statements and back them up during the talking -while-observing sessions. ...the leader invited discrepant views and the discussion that followed moved deeper into the process (Lyons, Pinnell, DeFord, 1993, p.47).

The professional Masters group meet weekly and are led by a variety of tutors. They gain experience of observation and critique through regular lesson observations at IOE and they shadow existing teacher-educators in the field. Their programme has an evolving emphasis; with term one focussing on early literacy theory and teaching procedures for work with children in the literacy intervention. Term two introduces a shift into the teacher-educator role and the groups work on tutoring at the screen. Term three orchestrates the teacher-educator role and prepares the groups for leading their first sessions in the field, including managing implementations in schools. This development over the year and variety of tutors aims to enhance potential for opportunities to experience cognitive dissonance in the behind the screen learning context.

The learning environment of the professional Masters programme and the teacher-educator led sessions working with teachers in the field with a focus on 'behind the screen' lessons was the context for this study.

3.4 Lesson observations

The teachers and teacher-educators in this study are all early literacy intervention experts. They work with the lowest literacy learners after one year in school. These children are identified through diagnostic assessments (Clay, 2002). The approach to working with these children is unlike other literacy interventions, in that it relies upon highly skilled teachers rather than a set of published resources (Schmitt, Askew et al. 2005). The teachers follow the same sequence of lesson components for each child's thirty minute daily lesson. However, each component is carefully tailored to the needs of each individual child. This means that observers of these individual daily literacy lessons see the same seven components (familiar reading, running record, letter and word work, composition for writing, writing, cut up story, new book) every time, although each is uniquely delivered according to the child (Clay, 2005). The lesson

begins with familiar reading. The child rereads books they have seen before. The aim is for the child to practise successful reading strategies, build reading stamina, enjoy and comprehend books and to experience success as a reader on continuous text (Stanovich, 1986). A running record is taken of a book seen the previous day. This book will become part of a collection of familiar texts the following day. The running record is an opportunity for the teacher to observe and record the child's independent processing on text and strategies used or ignored at points of difficulty. The running record is used as a diagnostic assessment to inform teaching points and to plan next steps. The third component is letter and word work, also recognised as phonics. This component sees the child standing at a magnetic whiteboard manipulating magnetic letters. The aim is to develop fast visual processing and to help the child understand how letters and words work by attending to detail in print, serial order, constructing words, using analogy (Schmitt, Askew et al. 2005). Then the teacher engages the child in a short but genuine conversation. This conversation supports the composition process. When a suitable composition has developed from the conversation, the child works to record the composition in writing. The teacher scaffolds the child's learning about writing, spelling and grammar (Rodgers, 2000). The completed story is written onto a strip of card and the child rereads it before it is cut up by the teacher. The child has to re-sequence the cut up story. This reinforces the reciprocity between reading and writing and the child practises strategies learnt about directionality and orientation of print, meaning, word reading, spelling and punctuation.

The cut up story provides an opportunity to orchestrate many literacy activities on familiar material, slowed up and constructed deliberately (Clay, 2005b, p.85).

Finally, a new book is introduced in preparation for the running record the following day and the child reads it. Schmitt et al. (2005) identify the opportunities for learning from these activities on the new book:

Using emerging strategies on new text; consolidating some strategies; learning new strategies; and making connections; going beyond information given; solving problems independently; reading and understanding a new text; revisiting vocabulary in novel texts; and reading, anticipating, monitoring, and self correcting, guided by information from different sources (p.86).

All this takes place in thirty minutes per lesson. The components and their sequence within the lesson follow clearly researched rationales (Clay, 1991; 2001; 2002; 2005) and are universally applied wherever this literacy intervention is implemented (Lyons et al. 1993). Each literacy intervention teacher implements this sequence of lesson components on a daily basis with the lowest literacy learners aged between five years nine months and six years three months in their school. Each teacher-educator as a facilitator of professional development also teaches children, as do the University tutors of the professional Masters programme. This shared experience of teaching challenging literacy learners underpins the professional learning community and informs the critique of lessons observed via the one way screen. This requirement for consistent implementation (Schmitt, Askew et al, 2005) created a reliable context for observing and recording lesson observation and critique across four different centres for this study.

3.5 Participants

The participants were teacher-educators providing literacy intervention professional development to teachers. I used an amended three stage sampling process after Morse (2007). Table 3.1 indicates my plan against Morse (2007). I selected the sample on the basis of opportunity with my sample drawn from teacher-educators across England that I had access to as part of my professional role within the University tutor team for this professional Masters programme. In my sampling plan I conflated the first two stages and my participants were purposively selected from the range of opportunities my professional role provided specifically to provide participants of a particular stage. In this case it was to ensure a range across the levels of experience of the teachers within

the professional development sessions, from teachers initially learning about the literacy intervention to experienced professionals and across teacher-educator and tutor experience (less experienced, more experienced). The third stage was a theoretical sampling strategy, selecting materials, participants, and tutors on the basis of ‘their expected level of new insights for the developing theory in relation to the state of theory elaboration so far’ (Flick, 2006, p.126). The theoretical sampling strategy was chosen because it enabled me to ‘take advantage of fortuitous events’ (Corbin and Strauss, 2008, p.145) which supported ongoing data analysis until a point of theoretical saturation was reached, in common with the grounded theory approach to my data analysis approach. In practice, external factors affected the sampling plan and I had to make adjustments in the light of ‘real-world’ events. These included a change of government and funding policy which impacted upon the employment of my proposed participants, their availability and ability to participate.

First stage Convenience	Second stage Purposive	Third stage Theoretical
Conflated Morse’s stages selecting from those available via professional role to ensure range across types of PD and levels of experience		Selection according to emerging concepts and theory
IPD CPD + Prof. Masters	Tutors and Teacher-educators ranging in experience from new (1-2yrs) to experienced (5yrs plus). Total of 8 participants	IPD CPD Prof. Masters 7 participants

Table 3.1: Sampling strategy and participants

As a result, I followed a modified version of my original sampling frame with stages one and two conflated. My sample was purposive with participants selected on the basis of providing cases ‘from which we feel we can learn the most’ (Stake, 2005, p.451). Each participant was a teacher-educator or tutor who gave permission for their groups of teachers or teacher-educators in training to be approached to consent to the

professional development session being included within the study. From the original sampling framework I had a potential 18 participants (teacher-educators or tutors) from the first two stages and 17 first round data collection points (professional development sessions). In reality, due to inclement weather, external factors such as teacher job losses, and localised issues affecting individual implementations whereby it was not felt appropriate to request participation, that reduced to eight first round data collection points (professional development sessions) and seven teacher- educator or tutor participants. Since my focus for the study was on the phenomenon of cognitive dissonance rather than the individual professional development sessions, it remained important for there to be a range of experience and location across my participants despite the reduction in participant numbers and cases (professional development sessions). The aim was to choose participants ‘who can contribute to an evolving theory, participants whose main credential is experiential relevance’ (Rudestram and Newton, 2007, p.107). The total number of cases for this study reduced further when original participants withdrew from the study due to work pressures so data collected was not included leaving a total of seven cases across four centres (with pseudonyms of Avalon, Balmoral, Camelot and Duchy). Table 3.2 indicates the number of cases and their range. The teacher-educators and tutors (facilitators) leading these had a range of experience and the cases spanned location types, from rural to urban. The sample aimed to follow Roth (2005) to ‘describe multiple episodes showing the same phenomenon for it provides a better indication for the variations which exist’ (p.286). This supported the potential for replication (Yin, 2009) and the ability to develop an articulation of cognitive dissonance within complex adult professional learning that would be applicable beyond the individual cases themselves. To ensure participant anonymity it is not possible to provide the exact year of training, years of experience or location of their

implementation as that would reveal participant identity to those within that particular professional learning community.

Key

PD = Professional Development

IPD = Initial training in literacy intervention

PM = Professional Masters

CPD = Continuing Professional Development for experienced teachers

Type	PM	IPD	CPD
No. of cases	3	3	1
No. of lessons	6	6	2
Range of teacher-educator/tutor experience	Full Mid New	Full Mid	Full New

Full = 5 yrs plus Mid = 2-4 yrs New = 1-2 yrs

Table 3.2: Number and type of participant cases and range in experience.

3.6 Data collection

Multiple sources of data were adopted to reduce the possibility of bias, to aid triangulation (Robson, 2011) and to create a 'chain of evidence' (Yin, 2009, p.122).

Data were collected through naturalistic audio taped observations, field notes, including handouts from the professional development sessions and interviews. Visits to professional development sessions for these teacher-educators had already been arranged as part of an existing programme of support organised through service level agreements with Local Authorities (LAs). Specific access and permission to enable data collection was negotiated with participants individually and is discussed in more detail in the ethics section of this chapter.

Key: as for Table 3.2

Type of data	Detail	Number	Source
Observations:			PM, IPD, CPD
Participant observation	Field notes and observation of PD sessions	7	
Lesson observation	Audio taped lessons, 2 lessons per PD session	14	
Field notes	Included handouts and documentation from PD sessions	7 sets	PM, IPD, CPD
Interviews	Semi-structured, audio taped interviews	4 individual 1 group	1 Tutor 3 Teacher-educators 3 teacher-educators in training

Table 3.3: Data type, quantity and source

3.6.1 Observations:

Naturalistic observations of the lessons behind the screen activity were made. These live lessons formed part of existing planned PD sessions across the Spring and Summer terms in the academic year 2010-2011 across a range of implementations. Each pair of lessons was part of an IPD or CPD session led by a teacher-educator or visiting tutor or part of the professional Masters led by a tutor. Implementations ranged from rural to urban with less experienced to very experienced teacher-educators or tutors. All adhered to the literacy intervention standards and guidelines (RRNN, 2006) giving a consistency of structure and organisation of sessions. The content and focus of each PD session, however, was tailored to the needs of the teachers attending, based upon the knowledge and understanding of the PD process and group by the teacher-educator or tutor. This meant that the behind the screen lessons followed the same lesson components (Clay, 2005), order and organisation regardless of location or experience, but that the session focus, actual teaching interactions and leading of the discussion at the screen by the teacher-educator or tutor varied.

The observations were recorded through detailed notes produced in situ capturing all that the teacher-educator or tutor said at the screen and using a coding system for

capturing responses from the group. To support the note taking and to provide more detailed information and to enhance objectivity, the sessions were audio taped using a digital recorder. Copies of the audio tapes were sent to the participating teacher-educators and tutors for respondent validation (Cohen, Manion, and Morrison, 2007).

3.6.2 Field notes:

I collected field notes of the IPD and CPD sessions observed alongside handouts and materials produced by the teacher-educators or tutors facilitating the sessions. This provided background information, contextual and additional data to inform the observations. Field notes helped support data triangulation and offered insights into aspects of cognitive dissonance facilitation. In some instances, handouts were produced by the teachers teaching behind the screen, providing an overview of their planned lesson and focus for teaching. The field notes took the form of as full as possible notations during the sessions, alongside annotations on handouts provided by participants or teachers at the sessions.

3.6.3 Interviews:

Semi structured interviews were conducted and followed a common format but individually based upon transcripts of observed lessons so remaining personal (Gilham, 2000). In preparation for the interview, participants were sent copies of the audio taped lessons on a CD. They were asked to make brief notes using the timer on the audio tape to indicate interactions, or moments that they, as leaders of the session, regarded as interesting in some way or pertaining to cognitive dissonance. No definition or examples of what cognitive dissonance might mean in this context was provided. The participants' annotations of the lessons were discussed and followed up during interviews to support triangulation of data. Interviews began by thanking participants for taking part in the study and giving their time to annotate the tapes. Participants then

talked through their annotations and understandings on an individual basis. Interviews informed my hypotheses about the role of the facilitator in recognising, planning and using cognitive dissonance within complex professional learning. Interviews were audio recorded for accuracy with transcripts being sent to participants for member checking (Robson, 2011). Originally, several rounds of interviews, from an initial one accompanying the lessons to interviews post transcript as a professional discussion about the nature of cognitive dissonance and its articulation through the observation were planned. However, the external circumstances affecting some participants, as mentioned previously, meant that the interviews were reduced due to participant availability. However, Cohen et al. (2007) suggest that quality of interview rather than quantity is more important. To that end I used the guidelines for the conduct of interviews (*ibid* p.366) as a framework for the process. A semi-structured interview took place at a time and place of convenience to the participant after they had reviewed the audio tape of their facilitation of the discussion of the lessons behind the screen. Further interviews were subsequently arranged according to information and insights from analysis of the data (Flick, 2006). The interviews were recorded using a digital recorder with the permission of the interviewee. This was to ensure the accuracy of the interview record. The disadvantages of the digital recorder being visible and possibly affecting the answers given were outweighed by the advantages of enabling the interviewer to focus on listening, interacting with the interviewee and the reliability of the record (Robson, 2011). Interviews were transcribed, member checked and cross referenced with notes taken during the interview.

3.6.4 Ethical considerations

Data were stored securely following the ethical guidelines and procedures as set out in the British Educational Research Association (BERA, 2004) and IOE Doctoral School

guidance, with hard copy securely stored in a locked filing cabinet and electronic data encrypted on a password protected laptop. In addition, I reviewed the ethical considerations suggested by Cohen, Manion and Morris (2007) and these are addressed below.

3.6.5 Gaining access

I was a member of the tutor team on the professional Masters programme at London University at the point of data collection. I worked as a programme tutor and had a professional role towards its participants, both current and previous within the professional learning community. Quality assurance is an important aspect of maintaining the integrity and rigour of the literacy intervention implementation. One of my professional roles within the tutor team was the quality assurance and monitoring of IPD and CPD as provided by teacher-educators across England. This meant that I had professional access to all members of this particular literacy intervention professional learning community. However, access was for my professional rather than researcher role creating a tension with 'insider research' (Robson, 2011). Gaining research access necessitated obtaining appropriate permissions. After explanation of the research processes and its goals, and giving relevant assurances I acquired written consent from participants. This was a two stage process. The first stage was consent from teacher-educators and tutors giving their permission to participate and for access to the PD session to approach teachers and collect documentation, observations and other data sources for the purpose of this study rather than for professional access. The second stage was to request written consent from their PD group for audio taping of the live lessons during their PD sessions. This included specific written permission from the teachers and children behind the screen for the lessons because a by product of the discussion being recorded would be lesson interactions between teacher and child being

recorded too. The written permission was an opt-in with the right to withdraw consent at any point during the study (Appendix 2). This was important as I planned to disseminate interim interpretations from data at professional development events which participants might attend and potentially publish at the end of the study.

3.6.6 Dual relationships: power and protection

Informed consents were particularly important as a potential ethical tension was my complex role as a tutor on the professional Masters and researcher. This made me an ‘insider’ (Atkinson and Hammersley, 1994) and participant observer (McCall-Simmons, 1969; Robson, 2011) which raised ethical issues and possible tensions between my professional and researcher roles. The professional learning community which participants from this professional Masters programme join, operates at three levels: teacher, teacher-educator and tutor. At whichever level, there is an expectation that research will be undertaken, observations made and data collected. This is manifested in the annual five day residential professional development that all teacher-educators are required to attend and the ongoing commitment to action research. This cultural expectation goes some way to mitigate against the power relations as all teacher-educators engage in research in the field for the completion of their Masters award and beyond. So my plans for the dissemination of interim data analysis at their PD event were agreed, subject to appropriate safeguards for anonymity. I plan further dissemination of the final study through conference presentations and publications and participants acknowledge this as part of the ongoing research process since many teacher-educators continue their studies to aid their work in the field through data collection and observation.

The key component and the delivery systemis a staff development model that has some unusual features.... teachers see their own teaching as an opportunity to learn and extend that learning through observation and

interaction with others..... teachers “learn to teach” but they could just as easily say that they “teach to learn” (Pinnell in Swartz and Klein, 1997, p.8).

Whilst I was both a tutor and involved in the monitoring of implementations, it might have been perceived that I was in a powerful position over the participants (Robson, 2011). However, in practice this was not the case. At the time teacher-educators were employed by LAs and I had no power in terms of their employment, funding allocation, performance management or status on the programme. My professional role was to support them during the professional Masters and subsequently whilst they worked as teacher-educators in the field. So there was no direct power through employment relations. The potential power relationship was true for the Masters programme, in the sense that my professional role included marking coursework and leading some participant learning. However, work was marked and second marked by different tutors during the draft and submission cycle associated with this programme. So in the area of assessment any perceived impact was significantly reduced by the number of draft and submission opportunities experienced by each participant.

To further reduce any possible conflict and to recognise and respond to genuine concerns I involved my programme tutor colleagues, (with their permission) those delivering and observing for other purposes as an informal check in order to ‘maintain the researcher stance’ (Robson, 2011, p.404). I used triangulation of data to expand the potential for reliability of understandings by reducing the likelihood of bias (Cohen, et al. 2007). In addition, all participants were assured of confidentiality; pseudonyms were assigned and background details that might identify participants were not used. This meant that information such as gender, location and length of implementation, or year of training could not be used in analysis of the data as that would enable members of the professional learning community to identify participants. Furthermore, using the date of observations alongside the pseudonym would also potentially enable identification of

participant. This considerably reduced the detail of data reported. These considerations applied equally to tutors and teacher-educators on the programme. To ensure that ethical considerations were taken into account for the semi structured interviews I gained written permission from the interviewees in advance with the option of withdrawing at any stage of the study and I followed the guidelines suggested by Cohen et al. (2007). Interviews were conducted in a mutually agreed venue and at a convenient time for the interviewee. Interviews were recorded for accuracy using a small hand held digital recorder for discretion. Interview transcripts were sent to participants for member checking.

3.6.7 The affective domain

This study was located within the complex adult professional learning as occurring through the observation and critique of live lessons behind a one way screen and led by a facilitator (teacher-educator or tutor). The study concentrated on audio taped and observed tutoring at the screen of lessons with the focus upon the role of the facilitator and the way in which they identified and used cognitive dissonance as it occurred as an educative resource. Teaching behind the screen and participating in lesson critiques can create anxiety for participants in the normal situation, even though lesson observations occur fortnightly in the training year (IPD) and frequently thereafter. 'Admittedly, the first behind the glass experience can cause uneasiness' ((Lyons, Pinnell, DeFord, 1993, p.41). Teacher-educators and tutors work hard from the beginning of initial PD to develop a learning environment that supports a constructivist approach to learning (Roskos and Bains, 1998) through risk taking (King, 2005) and valuing the status of the adult learner (Brookfield, 1986) and I was aware of the possible discomfort or distress that my presence might trigger within professional development sessions. Whilst I was unable to remove any possibility of embarrassment or anxiety from the process entirely,

I planned to alleviate as much as possible since the individual teacher contributions to the discussion or the lesson itself were not the focus of my study. By the Spring and Summer 2011 terms identified for data collection all participants had experienced lessons behind the screen for a minimum of six months, many had experienced this for much longer (years in CPD). According to Lyons et al. (1993) the experience of both teaching behind the screen and observing colleagues over time reduces defensiveness and enables teachers to examine their teaching and beliefs. On that basis it was less likely that participants in CPD would be negatively affected. To further reduce the possibility I used a small digital audio recorder for discretion. I did not video record the lessons due to the possibility of increasing anxiety or changing participants behaviour (Robson, 2011) and because of the logistical difficulties of recording in different venues with different environments and the possibility of the actual videoing process overtaking the events (Robson, 2011). By audio taping the critique of the lessons behind the screen I captured the teaching interactions of the lesson too. The audio lesson record supported my transcription and analysis of the lessons, but required specific permission from the parents of the children being taught and the children themselves to record the lesson for research purposes. Making notes whilst observing lessons is often encouraged during PD sessions so my written observations were not perceived as unusual. Copies of sample permission forms for written consents for all participants are available in Appendix 2.

3.7 Data analysis

Since I had chosen an exploratory case study design it was appropriate to the research goals to adopt a grounded theory approach to analyse data with a theoretical sampling frame (Glaser and Strauss, 1999). My rationale was that 'generating grounded theory is a way of arriving at theory suited to its supposed uses' (*ibid*, p.3). An advantage was that categories emerged from data, a disadvantage was the volume of work (Edwards

and Talbot, 1999). I started analysis of data as I collected it: ‘generating, developing, and verifying concepts - a process that builds over time and with the acquisition of data’ (Corbin and Strauss, 2008, p.57). Simultaneously I applied a constant comparison analysis using a combination of NVivo software and hard copy to support my organisation of data analysis and search for themes and categories that might be evolved into a theoretical explanation or model of this aspect of learning within the curriculum as experienced.

The constant comparative method is designed to aid the analyst who possesses these abilities in generating a theory that is integrated, consistent, plausible, close to data – and at the same time is in a form clear enough to be readily, if only practically operationalised (Glaser and Strauss, 1999, p.103)

My starting point was the observed and audio recorded lessons accompanied by field notes and documentation from the sessions. Analysis of these informed my selection of interviewees. By adopting Glaser and Strauss’ four stage constant comparative method (1999) I created a tight loop of coding, reviewing, revisiting across my data sources. A research journal was also kept and this created an audit trail capturing the process of identifying themes, and gaining insights which informed memos. I used these memos and notes to revisit data in order to gain fresh understanding. I chose to use NVivo software for coding but a research journal for memos and conceptualising relationships. The research journal was part of the supervision process and was referred to during meetings creating a type of peer checking and working to support reliability. Grounded theory is seen as a method of discovery while Charmaz views it as a ‘set of principles and practices’ (2006, p.9). Charmaz and Glaser dispute the importance of emergence of core categories within a constructivist framework for grounded theory (Holton, 2007). I choose to agree with Glaser that the emergence of a core category is crucial but I also found the following questions after Charmaz (2006) helpful in developing my analysis:

- Did my theory have a close fit to the data?

- How useful was it in answering my research questions and adding to the body of knowledge?
- Was there conceptual density?
- Did my theory offer explanations?
- Could it be modified?

This cycle of questioning helped me to revisit data and to investigate further. I used diagrams, initially within my research journal, subsequently drawn out on large sheets of paper to visualise my conception of data and to refine my theories. Miles and Huberman (1994) suggest that 'conceptual frameworks are best done graphically rather than in text' (p.22). This also enabled me to share my preliminary understandings with tutor colleagues for the purposes of member checking, reliability and data triangulation. Their comments helped me to refine further and to consider specifically the 'explanatory power' (Charmaz, 2002, p.6) of my analysis. My conceptual framework is a 'grounded model' in that it does not represent a testing out of a theory against data but rather the culmination of 'an abstract theoretical understanding of the studied experience' (Charmaz, 2006, p.4). Triangulation across data sources confirmed this tighter model as a useful way of proceeding and identified key concepts which I used to inform my 'discuss-sional theory' (Glaser and Strauss, 1999, p.115) arising from my exploration of cognitive dissonance as an educative tool. I discuss these key concepts and developing theory in detail in Chapter 4.

Chapter 4:

Results, analysis and interpretation

4.1 Introduction

The research was designed as an exploratory multiple case study to explore the role of cognitive dissonance as an educative resource in complex adult professional learning. The context for the study was a MA level professional development programme which offered layers of development (from initial training of experienced teachers as specialist early literacy teachers, through ongoing professional development, to Teacher Leaders working at Masters level). This professional development programme adopts a constructivist approach to learning and provides an observable example of the complexity of adult professional learning through its use of observed live lessons via a one way screen led by a facilitator. The aims of the study were to explore cognitive dissonance towards a greater clarity of its characteristics and features so that professionals might more effectively utilise it within professional development; to posit factors that might enhance its use and value within the transformative learning process. These aims were responses to three particular issues. First, a recognised need within the particular professional development programme community for greater clarity in identifying cognitive dissonance to support less experienced colleagues in using it to create deeper understandings about literacy acquisition. Second, responding to literature calling for a focus on developing a deeper understanding of the process rather than outcomes of transformative learning to improve practice (Taylor, 1997; Snyder, 2008). Third, an interest in further study into the concept of cognitive dissonance which arose from recommendations made in my previous research (Ince, 2010). In that study, I suggested three possible outcomes from a dissonant experience and proposed tentative

features of cognitive dissonance and I wanted to discover whether those features were applicable and helpful in professional learning.

In this chapter I begin with a review of data analysis before outlining and presenting my conceptual model for cognitive dissonance as an educative tool in complex adult professional development. Then I explain how this model was developed from the data and I explore the factors that affect the application of cognitive dissonance within professional development to present a revised and more comprehensive conceptual model. I summarise my findings and in Chapter 5, I discuss implications for practice.

4.2 Review of analysis

This study adopted a grounded theory (Glaser and Strauss, 1999) approach to data analysis (Chapter 3). As data were collected analysis started simultaneously. Categories and themes emerged from the data. A constant comparison method was applied so that while I coded an incident for a category I also compared it with ‘the previous incidents in the same and different groups coded in the same category’ (Glaser and Strauss, 1999, p.106). Key themes emerged around identification of features or characteristics of cognitive dissonance and the role of the facilitator. My research journal captured the process of my study, insights during analysis and interpretation of data. This created a paper audit trail documenting the decision making process at every stage and recording how and why I interpreted the data and reached the conclusions reported (Chapters 5 and 6). By reviewing data and revisiting my coding using Nvivo software and my research journal for memos, all other codes became integrated under either cognitive dissonance or role of the facilitator. A complex relationship emerged between cognitive dissonance, the use of observation and the role of the facilitator mediated by change over time which led to the development of a skeleton conceptual framework as an expression of this relationship. This skeleton is introduced below as a simple version. Then I discuss the development of the model from simple to complex working towards

an elaborated version of the model, with a summary of my findings at the end of this chapter.

4.3 First thoughts: the bones of a conceptual model

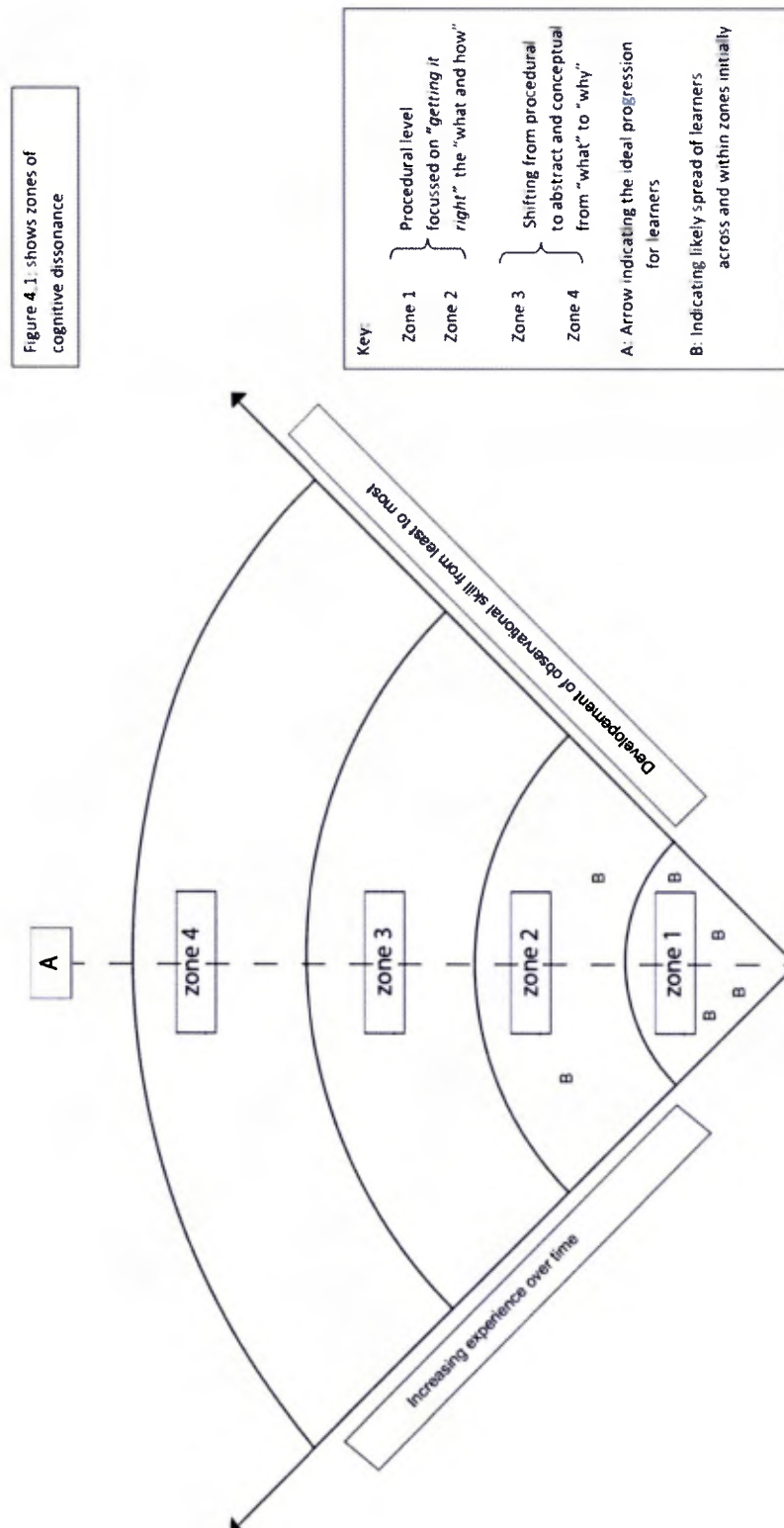
Discovering more about cognitive dissonance in this professional context was an important aim for this study. Analysis and interpretation of data enabled me to explore key questions about what, where, how and why cognitive dissonance appeared, was recognised, used and facilitated within complex adult professional learning. This led to developing an initial model which posited four main zones or locations for cognitive dissonance. These zones are not hierarchical or linear but locate cognitive dissonance within particular aspects of professional learning. Figure 4.1 shows how these zones relate to the use of observation and learner change over time. This model starts from a basic outline but as the different aspects arising from data are discussed and added to the model it develops to reflect the increasing complexity of interaction between elements.

4.3.1 Zones of cognitive dissonance

Interpretation of data suggested that cognitive dissonance was experienced by learners in the PD groups at two levels. First, at a procedural level, for example getting 'it right' and was concerned with teaching skills, procedures and behaviours. These included how to behave as a group in the specific professional development environment of behind the screen observing lessons. Second, at the conceptual level, for example: understanding literacy acquisition in children, and developing a greater understanding and exploring the theoretical implications of practice. Table 4.1 shows where these levels of dissonance might occur or be created. From data and using this table I identified the four zones for cognitive dissonance on the skeleton model. From a facilitator's view it would seem ideal for all learners to move in a forward and upward

direction. In reality individuals are spread across and within the zones, initially mainly zones 1-2 according to their prior experience of the literacy intervention and grasp of teaching procedures.

Figure 4.1: Possible location for levels of dissonance



These zones are not mutually exclusive and I theorize that there is a flexibility and transitional nature to their boundaries. I propose that professionals may move between the zones and not necessarily in a direct linear manner but in a recursive and spiral direction at times.

The zones reflect the facilitator role too. Initially the facilitator focuses on ensuring that learners are introduced to and learn about the teaching procedures and behaviours for observing live lessons through a one way screen. The lesson acts as a trigger for discussing misconceptions in understanding procedural level interactions. Subsequently the focus shifts from what is directly observed to using the observation of the lesson as a trigger for discussion and the introduction of alternative views, a more conceptual stance.

The first zone is at a low level of understanding primarily concerned with skills, behaviours and procedures, the 'getting it right' aspects of the literacy intervention procedures. It also requires the least skilled facilitation and is usually triggered by a mismatch between what is observed and personal experience and or practice at the procedural level. For example: 'I didn't think with familiar reading we were meant to be teaching. Have I remembered that wrongly?' (Teacher Melissa, lesson1, centre Avalon). The observing teachers focus on the teaching interaction and application of procedures and lesson structure behind the screen and compare it with their personal teaching. The second zone remains within procedural, behavioural and skill learning. The trigger seems to shift from comparison between personal and observed practice to the observed teacher child interactions. It may focus on the teachers' espoused theory versus their theory in use as observed (Argyris and Schön, 1974). Behind the screen, Laura, the facilitator comments on the group querying what they are observing in comparison with what the teacher told them during the introduction to the lesson:



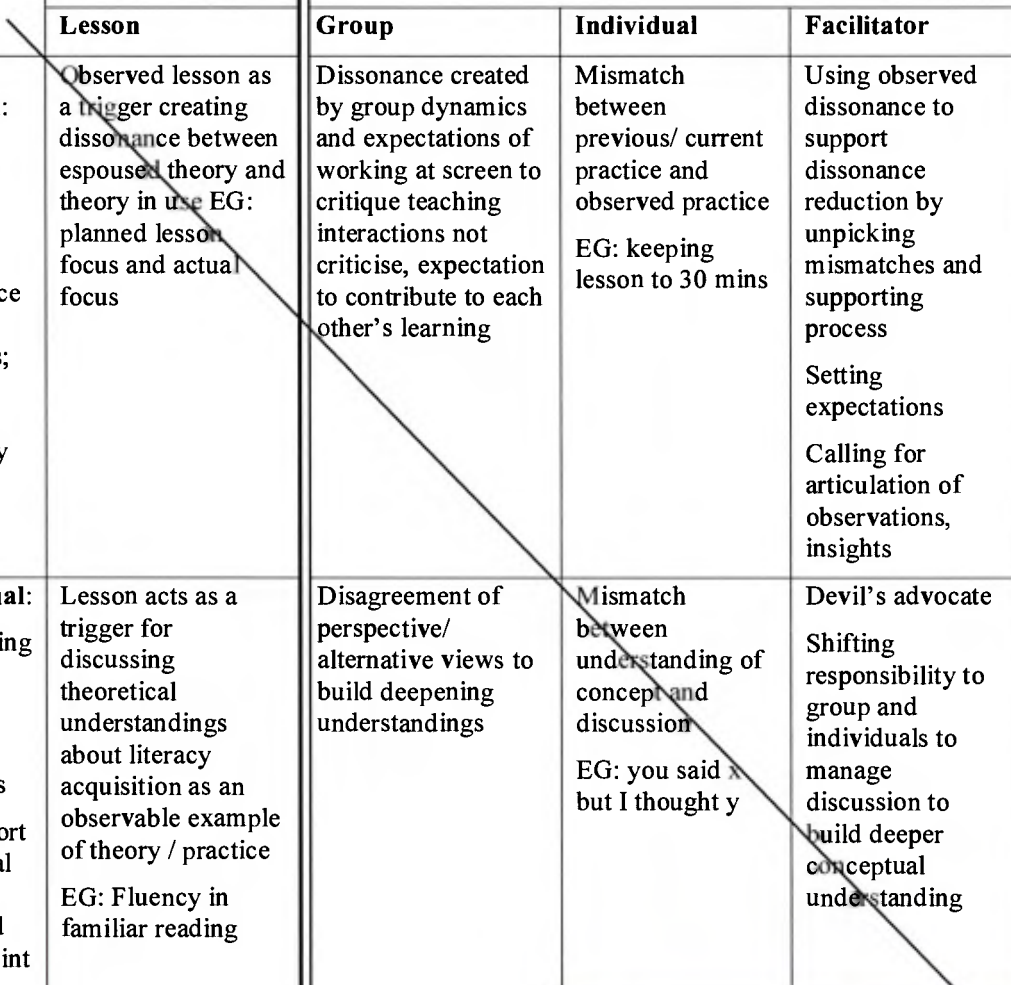
	Level of dissonance	Trigger	Location of cognitive dissonance with examples		
		Lesson	Group	Individual	Facilitator
Zones 1-2  Zones 3-4 	1. Procedural: Skills Behaviours Processes EG: sequence of lesson components; how to do letter sort; how to carry out running record	Observed lesson as a trigger creating dissonance between espoused theory and theory in use EG: planned lesson focus and actual focus	Dissonance created by group dynamics and expectations of working at screen to critique teaching interactions not criticise, expectation to contribute to each other's learning	Mismatch between previous/ current practice and observed practice EG: keeping lesson to 30 mins	Using observed dissonance to support dissonance reduction by unpicking mismatches and supporting process Setting expectations Calling for articulation of observations, insights
	2. Conceptual: Understanding (literacy acquisition) Theoretical implications EG: letter sort as fast visual perception; what a child does at a point of difficulty provides an insight into strategic processing	Lesson acts as a trigger for discussing theoretical understandings about literacy acquisition as an observable example of theory / practice EG: Fluency in familiar reading	Disagreement of perspective/ alternative views to build deepening understandings	Mismatch between understanding of concept and discussion EG: you said x but I thought y	Devil's advocate Shifting responsibility to group and individuals to manage discussion to build deeper conceptual understanding
<div>  </div> <div> Arrow indicates change over time and shift from procedural to conceptual </div>					

Table 4.1: Location and level of dissonance with examples.

But you're right, there is that kind of dissonance isn't there, between whether we're working on fluency and not interrupting to allow the child to be a fluent reader, or prompting for fluency, and actually pulling them back to word level (Laura1, Facilitator, lesson 1, centre Avalon)

¹ All names of people and centres have been changed to ensure confidentiality.

Or the cognitive dissonance may be located within behavioural elements of group interaction. For example the way in which the group work together at the screen. Sarah reflected on her facilitation of a session at the screen:

I was unhappy with the conversation at the screen in it becoming negative and I was trying, and I don't know how successful I was, but I was trying to move the conversation in a not a different direction, so not saying they weren't seeing what they saw, but thinking about themselves as learners ... If this was their teacher behind the screen, how would they manage that so it would be a constructive experience for the teacher. So there was a dissonance between what I anticipated the group or how I anticipated the group to hypothesise on and what I was hearing and I wanted to move it on, (Sarah, Tutor facilitator, centre Duchy).

Zone three saw a shift from a focus on the procedural towards the conceptual level of understanding. Laura explains how it occurred in her group of learners:

It's just that little bit of dissonance between them as teachers and starting to challenge each other, ... and I suppose that it's a bit like working with the children and you are encouraging them to be risk takers, I'm seeing that with the teachers now, they're not afraid to disagree with each other and nobody takes any offence by somebody disagreeing it's a professional dialogue that's happening (Laura, Facilitator, interview).

Dissonance appeared to be located within the group or individuals based upon differing interpretations and the offering of alternative views from a shared observed experience. The cognitive dissonance was a mismatch between current understanding and the possibility of a new alternative where resolution might lead to a deeper understanding at a conceptual level.

It might be when the teacher starts to disagree and because that teacher hasn't got a deeper understanding of whatever it is they are discussing at that time and someone else is starting to see it and they might say "no, I don't agree, maybe it's this or maybe it's that" (Amelia, Facilitator, interview).

Zone four focussed upon concepts and application of theory to practice in abstract. In this zone the location was less important. So it was not about a particular child and their lesson or the interaction between teacher and child rather that the observations triggered insights and reflections about the bigger picture in terms of teaching and learning. The

discussion moved beyond the literal and specifics of what was being observed into abstract application and generation of theory.

Yes because I think at the beginning it's easy to sit there and watch a lesson and think that you are there, all you really need to do is talk about what you are seeing and help that teacher to get better and then you learn that it's about your learning and other people around you (Amelia, interview).

Thus the lesson or observed incident was an example of a bigger principle about literacy acquisition or teaching interaction, for example the use of teacher talk for instructional purposes rather than the actual words spoken in the teacher child interactions as observed. The group then used the observed incident as a catalyst to discuss their current understandings and build a cycle of talk that led to a deepening of their knowledge and understanding. The focus moved away from what was happening behind the screen in the lesson to abstract discussions at a conceptual level. Simultaneously, the group continue observing the lesson. So if something more powerful is observed, the facilitator or one of the group can comment on it and a decision can be made as to whether to continue with the discussion, or re-engage with the detail of the lesson. The facilitator role includes being ready to pick up issues raised during observation again at a later point. Within zone 4 the cognitive dissonance was created by a mismatch between interpretations or alternative views. The ability to recognise the locations and levels of dissonance has implications for the facilitator role in terms of their ability to identify, manage and nurture cognitive dissonance to support learners' progress towards deeper understanding at a conceptual level.

4.3.2 Skilled Observation over time

Running alongside movement in these zones was the passage of time, specific to this study, the professional development programme year. Being able to engage with concepts at a higher level around early literacy acquisition and teaching interactions

required skilled observation and development over time. The skilled observation grew from an initial ‘wishing you would shut up so I can watch that lesson’ (Pamela, interview) to the ability to observe the lesson, listen to colleagues and contribute insights. Figure 4.2 shows how this change over time in skill of observing might be illustrated on a continuum.

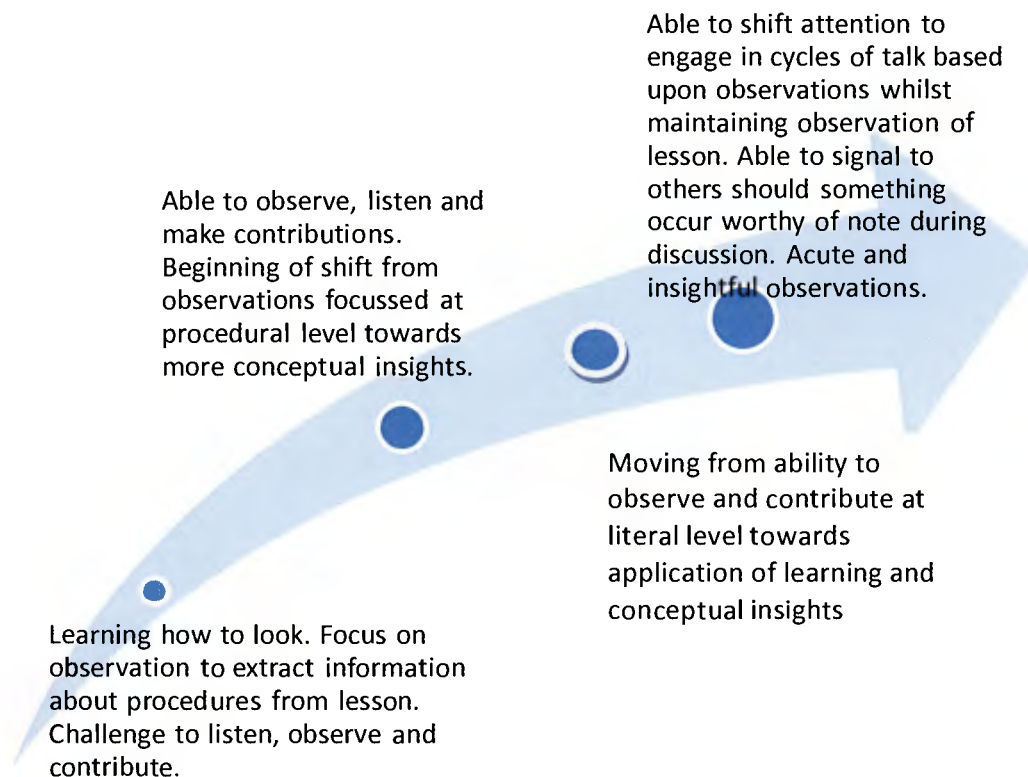


Figure 4.2: Representing change over time in observational skill

Observation skill, even in experienced professionals developed and grew over time. This process of change was supported by the role of the facilitator that is discussed later in this chapter. The focus for observers began with broad observations of the ‘what was happening type’, starting with basic descriptions of what they were seeing in the lesson.

It’s starting off like children, starting off with something known they can do so starting off with the calling for observations, what do you see and all are quite secure in that before you start (Amelia, interview).

From the ‘what’ of the lesson, facilitators supported a shift towards calling for evidence of what they were seeing and rationales, the ‘why’.

There is teaching going on, with Teacher and child and I, we are still stuck on that talking about what it is they are observing and ... it’s like that question and answer thing. I’d throw them a question “why are you seeing that”, “because of this” and then someone else “oh yes I agree” but if we are not really sort of expanding it and they are getting a little bit of evidence it’s all obviously coming from the observations from what they are seeing (Gemma, Facilitator, interview).

Increased skill in observation allowed the location of cognitive dissonance to shift from zone one to zone two as observers were able to observe and discuss simultaneously (Figure 4.1).

I’m saying things what I’m thinking. I’m just questioning myself. Is familiar reading meant to be doing all those things? I think I’ve got the wrong idea of a familiar read in my head (Teacher Belinda, lesson 2, centre Avalon).

The discussion of what is observed is central to the professional development model in this programme because of its use of ‘surface and animate’ within the social constructivist approach (Perkins, 2006). Unless observers articulate ‘what’ they are observing, followed by evidence of and ‘why’ leading to forming tentative hypotheses, the opportunities for resolving cognitive dissonance are greatly reduced. It is the resolution that leads to transformative learning.

The facilitators’ role is made more difficult if they do not know what in particular the observers are seeing and thinking about it. This reduces the facilitators’ ability to introduce information that may support understanding at the procedural level and subsequently support a shift to deeper conceptual understandings moving their learners from zone one towards zone four over time.

given that a lot of the conversation was stimulated by one bit from the [lesson] rather than me having to keep asking questions I think that’s evidence of perhaps they have [the teachers observing], they are able to listen and build on each other and I think the conversation was becoming much more reflective (Sarah, Tutor facilitator, interview).

This support might also include the explicit use of cognitive dissonance by the facilitator playing devil's advocate, to create a mismatch to stimulate discussion and lift understanding.

Analysis of data generated insights into the levels of dissonance, from procedural, skills and behaviour based towards conceptual and abstract. Information suggested four possible locations of dissonance: within the lesson, within the individual, within the group and created or exploited by the facilitator (Table 4.1). In an ideal progression the focus for the location of cognitive dissonance shifted from between the observer and the lesson to within the lesson and then between members of the group and between the group and individual, including the facilitator and the interpretation based upon conceptual understanding. However, it seems that there were recursive loops and that the spread of the learners across and within the zones made the ideal progression less likely for all in practice.

I now move from the location and level of cognitive dissonance to discussing what and how cognitive dissonance could be recognised and the form it took within the complex professional learning environment of this study.

4.4 Recognising Cognitive Dissonance

The expectation of encountering cognitive dissonance is explicitly introduced and discussed as part of the literacy intervention professional development programme. However, whilst individuals appear to recognise cognitive dissonance when experienced, they find it challenging to articulate as a personal description.

Well, I found that tricky. I found it very tricky to say that there were 'ah ha' moments but, then I started to realise that I was picking out what I thought was dissonance. (Sarah, Tutor facilitator, interview)

An aim for this study was to work towards identification of features of cognitive dissonance so that there could be greater clarity in understanding this concept within

professional development contexts. Previous research (Ince, 2010) posited some tentative features. These were that cognitive dissonance was individually experienced. An experience that created cognitive dissonance for one might not have the same effect for another. Cognitive dissonance seemed to be time sensitive and most productive when it is embedded within several cycles of critical reflection. Personal engagement by the learner to want to resolve cognitive dissonance seemed a prerequisite for perspective transformation to arise from cognitive dissonance. These factors became the starting point for exploring how facilitators might more effectively recognise and harness cognitive dissonance as an educative resource. Analysis of data identified a common language across the professionals which suggested a shared understanding of cognitive dissonance. They used terms such as “ah ha moments”, “challenges”, “enlightenment moment”, “shaking things up”, “light-bulb moments” and “dissonance”. There was constancy across the data and agreement among participants that cognitive dissonance could be recognised when it occurred.

well for me, it's kind of a physical thing. It's almost like I stop thinking for a second and it's like there is this “ah” (laughs) so I don't know how you can explain that although...in the school where I worked all that time ...I used to talk about moments. I don't know if other schools do that but we would identify a moment and like, I suppose people talk about a light bulb moment don't they (Andrea, Facilitator, interview).

Despite difficulties in articulating specific features of cognitive dissonance, participants consistently characterised cognitive dissonance and gave examples of how it might be recognised. Examples included physical responses as a feature of cognitive dissonance.

I find it's really quite physical in my head, it's like something I've already got there has moved, been shifted out the way and the new thing has come in but there is a gap between them and I've either got to put something in or push the two of them together or chuck one out, there's an actual physical space (Pamela, Facilitator, interview).

All those neural pathways are being, its real, yeah, but that's it isn't it, we talk about those neural pathways and that coating with the protein and everything when you have that cognitive dissonance it feels physical

because things are literally being rewired, re-jigged in your brain (Susan, Facilitator, interview).

Others identified an emotional aspect to cognitive dissonance: ‘sometimes it promotes that laughter as well’ (Amelia, Facilitator, interview).

Regardless of whether participants identified cognitive dissonance as physical or emotional, and in some cases both, they all identified that the actual experience of cognitive dissonance was internal and personal, although the outward manifestation might be seen or recognised by a keen observer.

It’s not just what they say to you. I mean it’s a bit like I was saying when I had the alarm bell moment, it wasn’t so much that anyone was saying anything, it was just that change in body language and you become a very powerful observer (Laura, Facilitator, interview).

There is sometimes that “OH” then I just remember one teacher at the screen and she’s really been worried that she doesn’t know anything but she’s very vocal about it so you can see it and then I said something and there was a pause and I thought “Oh no! that isn’t the right thing to say now” and then she jumped. She literally jumped and she was talking, talking, talking and she was trying to talk round it. (Pamela, Facilitator, interview).

Thus in working towards characteristics or features by which manifestations of cognitive dissonance in action might be more readily recognised, data provided repeating instances. These were that all participants felt willing and initially able to review transcripts of lessons and to independently annotate them at points where they identified cognitive dissonance. Analysis of data showed a consistency of annotation and explanation across participants. This included the vocabulary participants used when identifying cognitive dissonance, and going beyond the actual language used and drawing upon body language, silences, and their remembered experience of the recorded session. They were all able to provide explanations and rationales for why they had selected interactions from the transcripts and all were keen to discuss their choices and rationales at length (for example: Gemma and Sarah below). This willingness may have been because participants saw this activity as a useful part of their own critical

reflection and evaluation of facilitation, or perhaps because it gave an opportunity to share experiences in an otherwise potentially isolated role as facilitator?

I thought in some of it, it was their tone as well and how they were saying things. It wasn't that they were disagreeing with what was being said or anything like that, but it was like "don't forget that there's this bit" and I think that's where when they were talking about how they could speed up the writing, it was like there was a little bit of silence and then someone would say something and then all of a sudden you'd get a couple of other people and then you'd see them, obviously you can't see it on the tapes, but you'd see people sitting there and then nodding and I think that's why I put that one down (Gemma, Facilitator, interview).

I was looking at, basically where hypotheses had been put forward and where there was a challenge to that hypothesis or where there appeared to be a mismatch between espoused theory and theory in use, they were the sort of things that I looked for and listened for and that I picked up on (Sarah, Tutor facilitator, interview).

In undertaking the independent task of reviewing and annotating, some participants found their own understanding of cognitive dissonance challenged. They reflected on the sessions and the process of reviewing transcripts. This informed their interviews and responses. Reflecting on this led to the formulation of stage two of my conceptual model.

4.4.1 The Risk Area

Reviewing the transcripts of sessions and discussing these with participants and their own reflections helped me to develop a representation of a continuum of understanding of cognitive dissonance. From the data it was possible to identify factors that affected participants understanding of cognitive dissonance. The enhancing factors emerged as experience in role as a professional teacher-educator for the literacy intervention: personal commitment; and motivation; and critical reflection. When the facilitators' understanding of cognitive dissonance was added to the skeleton model a risk area was created. Figure 4.3 shows the skeletal model with the risk area identified. The risk is twofold. There is a risk that the facilitator misses opportunities to support learning and

that learners experience cognitive dissonance in such a way that they reject learning opportunities or in extreme cases reject the whole experience (Cano, 2005; Galman, 2009). This risk area is created when the facilitator is new to the role and does not engage deeply in critical reflection. When these factors are combined with lower personal commitment and motivation to become a skilled observer there is less understanding of cognitive dissonance. This results in the risk area where the facilitator is less likely to recognise cognitive dissonance as it occurs or to identify opportunities to introduce it in order to support transformative learning and trigger the shift from procedures towards conceptual understandings.

I think I picked up on procedural elements actually, rather than thinking about why they are doing it I noted down here speeding up the writing and how they would do that and again it going back to procedures rather than why they are doing it (Gemma, Facilitator, interview).

Within the risk area facilitators seem less observant and may miss the reactions, physical, emotional, of their learners as they react individually and personally to a challenge to their knowledge construct. It may be that newly qualified facilitators focus on their own performance and the challenge of facilitating reduces their observational capacity? Or perhaps they are observing so closely the teacher child interactions behind the screen, they may miss the reactions of the learners observing with them? Inability to recognise cognitive dissonance means that its potential power as an educative resource cannot be harnessed for perspective transformation leading ultimately to new learning. If the facilitator is unaware of the learners discomfort, created by cognitive dissonance, then they are not in a position to support the learner to work through the challenge by engaging in cycles of critical reflection where they can tussle with their understanding and challenges to it. This engagement in cycles of critical reflection is important in reducing the learners' feeling of discomfort from a cognitively dissonant experience and in supporting them to resolve the cognitive conflict (Festinger, 1957; Ince, 2010). Lack

of awareness by the facilitator may also create inadvertent cognitive dissonance whereby the facilitator sets expectations that are at odds with the position of the learner or group on their learning journey (Postareff, Katajavuori, Lindblom-Ylänne, and Trigwell, 2008). Sarah identified an example of this in her own facilitation:

I started re-listening to this session, I'd not included myself and I re-listened and thought well actually perhaps I do need to include myself because actually there are times when an action of mine has created some dissonance (Sarah, Facilitator, interview).

The risk seemed to be heightened within the lower zones and as experience and observational skill increased, risk lessened, Figure 4.3 represents this diminishing risk by fading out the risk area.

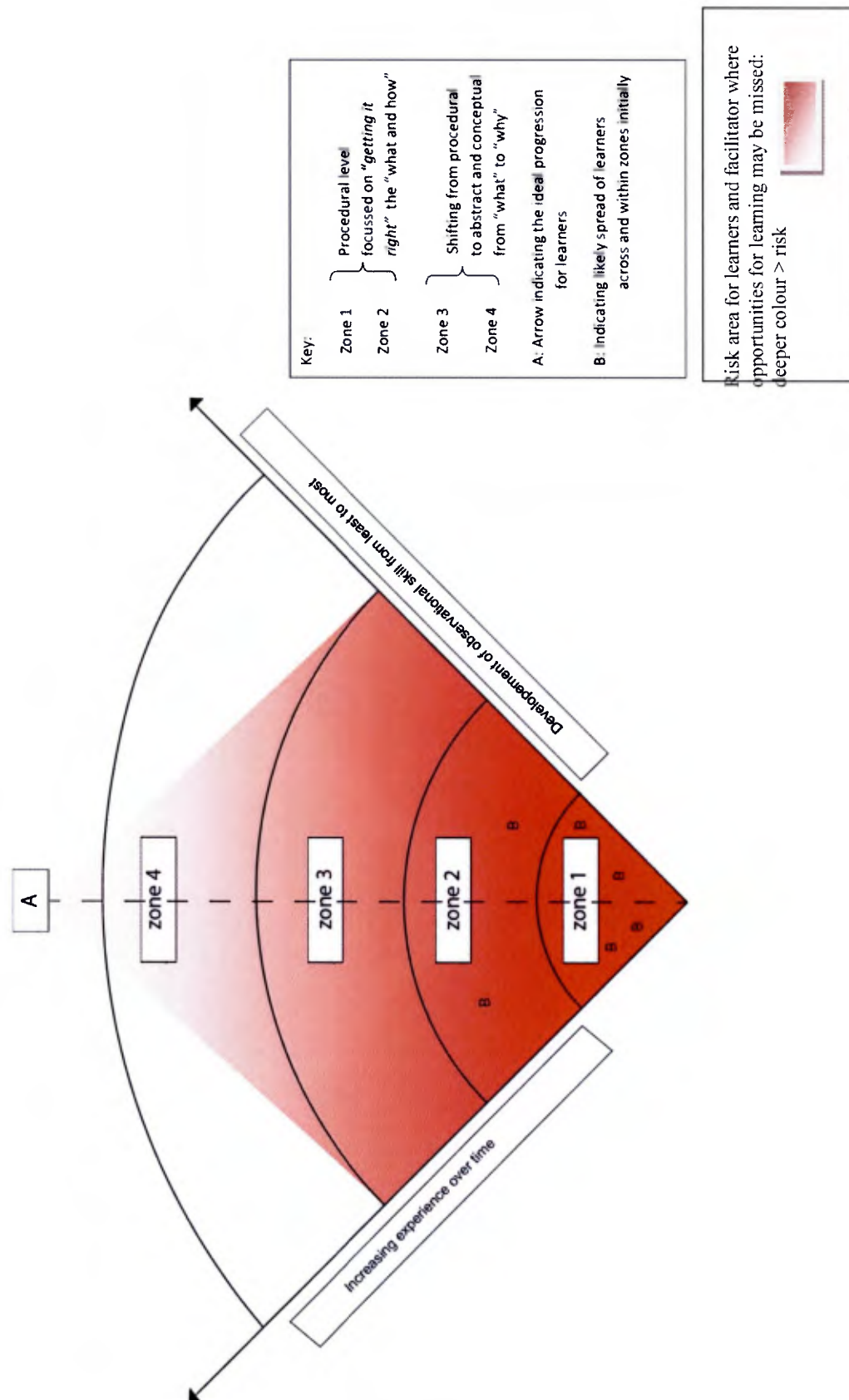


Figure 4.3: The risk area

Alternatively, learners experiencing too much cognitive dissonance which they are unable to accommodate within their 'theory in use' (Argyris and Schön, 1974) leads them to deny and reject new learning (Galman, 2009; Ince, 2010). The difficulty in recognising cognitive dissonance constrains the facilitator's ability to support the group in building cycles of talk that develop their understanding and to assist to problem solve the challenges created by the cognitive dissonance.

A further dimension to the risk area was identified by participants in the study. They explicitly discussed the risk involved in introducing cognitive dissonance to learners. There were two distinct parts to their concerns. The first concern was that it seemed counter intuitive to introduce something to learners which would challenge their existing understandings and make them feel uncomfortable. This was raised in a variety of ways across the majority of interviews. Gemma focussed on her anxiety of challenge being construed as negativity:

I don't want the group to see it as me being negative or critical in negative way of what they are doing (interview).

Whereas Andrea reflected on the tension between how she wanted to be viewed by the group as a kind, nice person who they could be friends with and her role in supporting their learning throughout an intensive professional development year:

There's that tension between I want to be kind really to the person who's doing the lesson for us and the fact that they really do need to move on and they need to understand that you have to... you just have to because of all the problems that can come up cutting short on things and you know, and anyway so I did knock and I said to them something like you know I really hate to stop people but it has to, we have gone over with that and then one teacher said but it's on her lesson plan, really like that quite defensively (interview).

This concern over the potential for making learners feel uncomfortable seems valid when considered against the facilitators' key role in developing a safe environment where learners felt secure and could take risks:

it needs to be made into a safe environment doesn't it where you can say or see you can speak and even if what you say doesn't turn out to be relevant or isn't taken on in discussion it's ok for you to have said that it's not embarrassing no one should walk away cringing (Amelia, interview).

From my interpretation of data I suggest that some participants were still tussling with finding the balance between opportunities for discussing misunderstandings with colleagues in a depersonalised and productive manner and being able to move beyond their comfort zone.

I think partly the group because, we are a culture of learning and it's ok to, maybe, to have had a misunderstanding, because to be able to talk it through with other people who would come in and, and say "yeah, I've done this", and perhaps the realisation that actually it wasn't the end of the world either, I hadn't stopped those children learning (Amelia, interview).

Others seemed to recognise the need for an environment where learners felt safe to take risks and step towards the 'edge of knowing' (Taylor, 2009, p.10).

The second aspect to their concern over the use of cognitive dissonance was that it created risk for them as professionals.

There's that perception that if you've had cognitive dissonance if you are trying to grapple with your understanding, that's not very professional (Pamela, Interview).

This concern appeared to centre on their previous experiences of professional development and understanding of the facilitator role. More experienced facilitators were aware of the risks associated with introducing cognitive dissonance to their learners and the potential discomfort it might create. They were less likely to be concerned over external perceptions about the nature of professional learning and the risk to their status as professionals. Instead they saw resolution of cognitive dissonance as an important part of the learning process. The risk area and understanding of both how it is created and minimised along with discussion of the perception of cognitive dissonance as counter intuitive to facilitating complex professional learning takes me

into a fuller discussion of cognitive dissonance as an educative resource in this next section.

4.5 Cognitive Dissonance as an educative resource

One of the aims for this study was to work towards describing features and ways of identifying cognitive dissonance to support less experienced colleagues in using it with their groups to create deeper understandings. Specifically this was an identified need located within the professional development community for this programme and was linked to deepening understandings about literacy acquisition. However, data showed that the features posited and the characteristics, zones, locations and levels were not necessarily content specific. Whilst the study context drew upon participants from an early literacy specialism, they in turn drew upon their wider experiences of professional development as adults. Below, Susan gives the example of the importance of reflective practice in school culture but identifies the tension that asking for help is seen as a sign of weakness, a contrast with her experience on the PD programme.

I know one of the questions I've been asked when I went to an interview as a consultant was "are you a reflective practitioner?" So if you mean do I go into the staffroom going I've really messed up can anyone help me, then yes as much as talking about what's gone well through child or breakthrough with children and its creating that culture within that group, really and wouldn't it be great if all schools had that culture in their classrooms it doesn't always work there and its having that wider impact as well (Susan, interview).

Participants appeared to be using examples of cognitive dissonance as identified in their annotated transcripts as triggers for discussing the application of cognitive dissonance at a conceptual level. They seemed to move between concrete examples located within the transcripts and abstract discussions which seemed in parallel with the levels and types of cognitive dissonance discussed previously. The flexibility with which they did this seemed to be linked to their personal understanding of cognitive dissonance and their location in relation to the risk area. Despite these potential personal differences there

was a consistency across the data in terms of when cognitive dissonance as an educative resource might best be achieved. Four factors emerged from data. The first was the importance of creating an appropriate learning environment. This resonated with anxieties about risk and the desire to maintain a good, positive relationship with their learners as discussed previously. Simultaneously, the majority recognised that comfort on its own was insufficient for a learning environment. Instead the need was for an environment which enabled discussion of problems in a non judgemental and supportive way yet with an expectation that it might be tricky.

I think it's great but because of the context in which it happens, which is really supportive which is important and because we all know and are all going through it and we are all at different stages of understanding different aspects (Susan, interview).

The sense of a secure environment went beyond the immediate context and participants talked about being part of a community of learners and felt a culture of learning that located facilitators and learners together in a common situation that was different to their workplace environments.

and think they are two different environments, here you don't feel as uncomfortable with it so much anymore I think it's all part of our learning and everybody, the trainers are learning, we are all learning and its part of what we expect to be doing now but when we go back to workplace we are judged in a different way (Amelia, interview).

The environment was important to provide learners with three particular opportunities to develop:

- the ability to articulate what they were thinking
- the ability to query or respond to what was articulated
- the ability to discuss alternative views, to challenge or be challenged.

From my analysis of data it seemed that unless the environment enabled these opportunities, learners were less able to progress through the levels and types of dissonance initially discussed (Figure: 4.1). Without having established a supportive

environment facilitators were less able to use cognitive dissonance as an educative resource.

The second factor that emerged was the need for a powerful observation or incident to act as a trigger or context for cognitive dissonance. This could come from one of the group or from the facilitator noticing and commenting. From the annotated transcripts there seemed to be a balance across data between examples coming from group observations and those coming from the facilitator. However, closer analysis showed a relationship between the level and type of dissonance and the skill of the facilitator. Exploring this relationship reinforced the identification of the risk area. It also created a section on the conceptual model identifying the most effective use of cognitive dissonance as an educative resource. This occurred when there were cycles of talk and the area indicated in Figure 4.4 between the two green arrows shows the optimum location for cognitive dissonance as an educative resource. I discuss how the triggers of powerful observation or incident, which appeared dependent upon the skill of the facilitator in how they were used to promote cognitive dissonance as a learning opportunity, in detail subsequently. In some cases though, it was not the actual observation itself that was powerful, it was the interaction and the way in which the facilitator made the familiar strange to present alternative views. This management of an observation to create cognitive dissonance which then serves as a context for perspective transformation relates to the two remaining factors that seemed to influence the use of cognitive dissonance that were again related to the skill of the facilitator. These were cycles of talk and personal engagement.

I just thought that as we were talking about behind the screen well what about those times when you start unpicking and digging deeper and the teachers just aren't coming along with you because maybe you've done it too soon or and that uncomfortable feeling of thinking I've over reached how can I get something at their level with this (Pamela, interview).

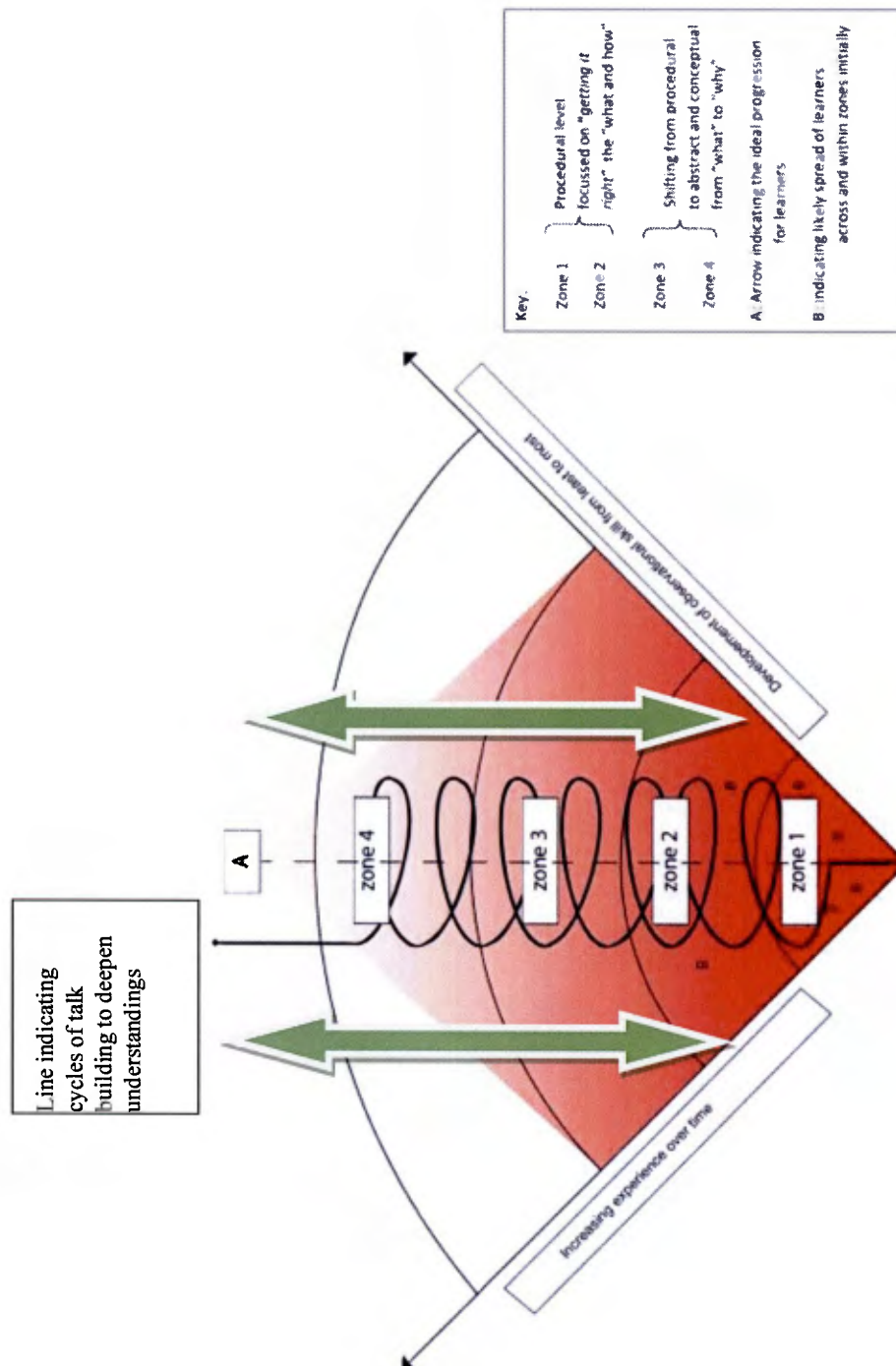


Figure 4.4: Optimum location for cognitive dissonance as an education resource

Pamela reflected on the challenge for the facilitator to ensure that in leading or supporting the discussion that the learners were enabled to move beyond observing and articulating to engagement in problem solving. This extract shows how Pamela, as the facilitator, engages in constant monitoring and evaluation of the cycles of talk to best manage the learning.

The cycles of talk offer learners the opportunity to grapple with complex concepts without having to do all the work themselves. A collective engagement and contribution is encouraged to create a build across the group rather than relying upon an individual to create the whole picture. The facilitator supports that build through their prompts, calls for more and manages the cycles of talk. Below is an excerpt from a cycle of talk about the familiar reading lesson component (Chapter 3). It starts small with the facilitator (F) asking: “what do you think?” there is a response, the facilitator thinks that there is more so calls for it and engages the group to help problem solve the issue. The discussion builds moving from short responses to a collective engagement in thinking about what the observation means and the alternatives for the situation. It begins with a simple open ended question about a straightforward and ordinary observation about book level.

- F: What do you think?
- Angela: This could be 13, it could be 12, it could be 11, but she should be reading this better shouldn't she?
- F: Why, why would she be reading it better? Or why should she be...?
- Angela: It's familiar.
- F: And that means? Somebody help Angela out here, she's doing work.
- Fran: She's read it before. A few times maybe.
- Sue: Yes, and it should sound nice and fluent.
- Karen: Like a story being read rather than...
- Pam: The tricky bit should have been worked at previously sort of thing so she should have ironed those tricky bits out.
- Mel: She did some, let her do it from the beginning my reading should sound like [0:3:07].

- Sue: She was aware of it.
- Angela: I just feel a familiar read should sound like the teacher reads the story to the class. I've had trouble following what this story's about, I know we're talking but it just isn't coming over as a little story to me. It's coming over as reading if you know what I mean.
- Karen: Yeah. She has got some nice sort of phrases with dialogue...
- F: If it's not sounding like a story, even though there are parts of it that are phrased and fluent and there's a little bit of nice expression, so what? Do the 'so what bit'.
- Angela: I would want to check about something that she's really familiar so ask her some questions, either stopping her at what bits going to happen next or can you remember what happens next, or ask questions at the end to check whether she's
- Mel: The other thing I tend to, I'd stop reading now. So tell me the end of the story in your own words so that she, because don't forget this is familiar isn't it this book. She should know it very well really.

(Lesson 2, centre Avalon).

This interchange shows how from a simple beginning, prompted by the facilitator the group work together to build a cycle of talk that takes their understanding from a low level comment about book level to alternative teaching decisions accompanied by rationales which move their collective understanding from a procedural level towards a deeper understanding of literacy acquisition. The interaction also highlights the engagement of the group with problem solving. This is not about problem solving for their child and their personal teaching at that moment in time. Instead it requires each individual to focus on the situation and to combine their experiences, observations and insights to offer feedback in the immediate future to the observed teacher and child. However, the pay off for each individual is in developing the cycles of talk which model the process of tussling between alternative views and critical reflection to resolve cognitive dissonance. Engaging with the process in a supportive environment enables individuals to critically reflect and offers transformative learning opportunities:

“Oh wow! So I get that, I didn't get that, I haven't got that all year”, left it quite late but I didn't feel particularly uncomfortable at that stage which was a realisation then that “yes, this is tricky to get your head around and

that's ok" and how great that I've had the opportunity to have that learning and feel like I can add something better now (Amelia, interview).

Thus the use of cognitive dissonance as an educative resource seems to be predicated upon these four factors of environment, observational triggers, personal engagement, and cycles of talk that in turn are dependent upon the facilitator. This suggests implications for the complex role of the facilitator which I now discuss.

4.5.1 Coherence from chaos: the complex role of the facilitator

Facilitating adult professional development is complex, as discussed in Chapter 2. The facilitator needs to enable their learners to progress from learning about procedures (what to do and when) to behaviours (the 'how to' as applied to the particular context e.g: teaching, observing, giving and receiving feedback, critique), and then to deeper understanding of key concepts (the why). This progression mirrors the zones where cognitive dissonance might be located (Figure 4.1) and the learners' own feelings of confusion about a new programme towards greater understanding and coherence.

Underpinning this progression is the facilitator's own understanding of each location for cognitive dissonance. If the facilitator does not recognise or is less able to identify cognitive dissonance learning opportunities are lost and the risk area increases, i.e.: missed opportunities for learning, potential overload through too much cognitive dissonance (Figure 4.3). The facilitator needs to identify how to support the learners' progression through the zones whilst also enabling a shift from responsibility for the learning environment and learning opportunities from the facilitator to the learners themselves. This change over time in responsibility is an important goal for the facilitator role. Figure 4.5 shows how the continuum of skill and change over time might be represented.

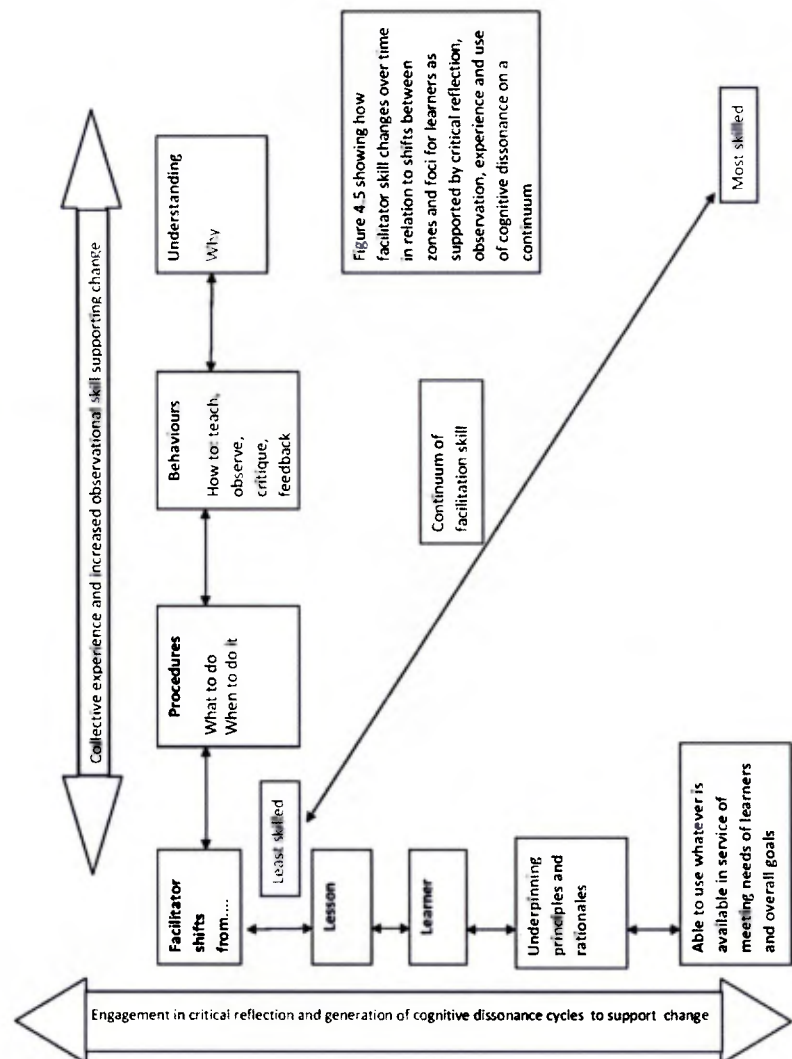


Figure 4.5: Continuum of facilitation skill development over time

Interpretation of data suggested five factors that appeared to affect the success of the facilitator role in enabling this progression. These were: the ability to critically reflect, experience in role, acuity of observation, personal motivation or commitment and knowledge and understanding of cognitive dissonance in learning. Each of these seemed to predicate the position of the facilitator on a continuum of complex skill development.

The continuum ranged from least skilled to most skilled, with data suggesting that combinations of factors might promote or inhibit progress along that continuum and that it ebbed and flowed. Figure 4.6 shows the five factors and how they influenced the facilitator's location along a continuum of skill development.

Experience: It would seem reasonable to suppose that increased experience as a facilitator would positively impact upon one's position along the continuum of skill. Certainly lack of experience impacted upon the likelihood of working in the risk area. However, in drawing together the various aspects of the facilitator role and considering these against the five identified factors key individual differences emerged. Data enabled individual participant facilitator profiles to be developed. Figure 4.7 shows the individual profiles for three participants. Experience was an important factor in the facilitators' ability to provide an appropriate learning environment, to manage the group dynamic, and to shift from procedures to behaviours, supporting their learners move through the zones of cognitive dissonance. The experience included both longevity in role and the richness of experience in terms of the learning environment (Taylor, 1998). It was perceived by the facilitators themselves as a factor which impacted on their performance.

that's the highest we have ever been and I think, you know, that is no doubt because I'm more experienced, the teachers have had a much better year this year than they had last year, but actually for those experienced teachers things are coming together (Laura interview).

Data analysis highlighted a tension between the perceived benefit of experience by participants and the profiles. Experience in role was useful as it enabled the facilitator with organisational and pragmatic aspects of the learning environment, managing group dynamics and subject knowledge. However in some circumstances it could act as a barrier:

and I think there is a pattern there because the more somebody's done, you know, unless they are willing to have that really open mind, it's got to get in the way you know,(Andrea, interview)

Lack of experience in role potentially hindered facilitators in their interactions with the group but more importantly with supporting the shifts from zones one and two into thinking more deeply increasing the likelihood of working within the risk area:

I think that I talk for too much and I think sometimes their silence makes me talk instead of waiting or I don't know, I haven't quite worked out how to – get more from them (Gemma, interview).

Less experienced facilitators were challenged in managing their own experiences of cognitive dissonance. For example: actually identifying dissonance itself appeared more difficult for less experienced facilitators whilst the potential for creating inadvertent dissonance seemed greater. An experience which is dissonant for the learners may also be dissonant for the facilitator and that may affect their ability to support the group in managing that experience in a way that moves them forward rather than into the risk zone.

So I thought that maybe I'd got it completely wrong or that I wasn't actually sort of going deep enough so that they would get that lift and think about the purpose and how to get the children to move on so I think I was looking for the wrong thing (Gemma, interview).

Analysis of data showed that although experience was felt to be important by facilitators it was not sufficient on its own to enable the progression towards deeper understanding at a conceptual level. It could be that experience in role was less important in determining a facilitator's skill than the abilities to observe, critically reflect, to have knowledge and understanding of cognitive dissonance and their personal motivation or commitment as facilitators.

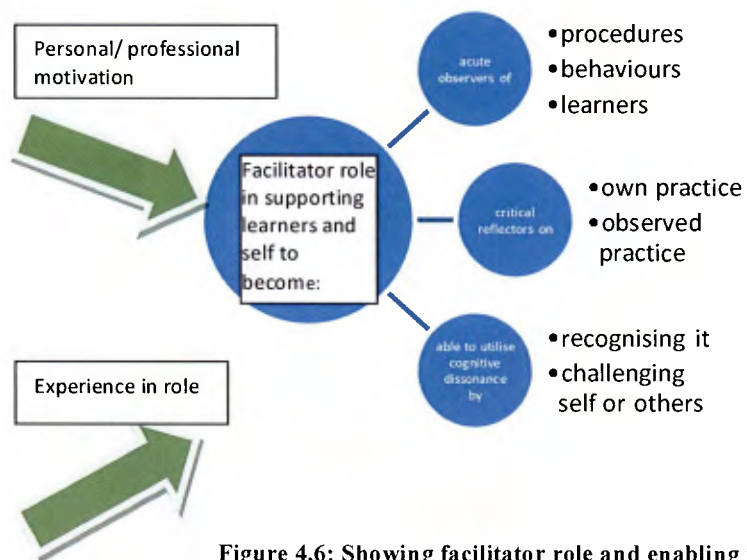


Figure 4.6: Showing facilitator role and enabling factors

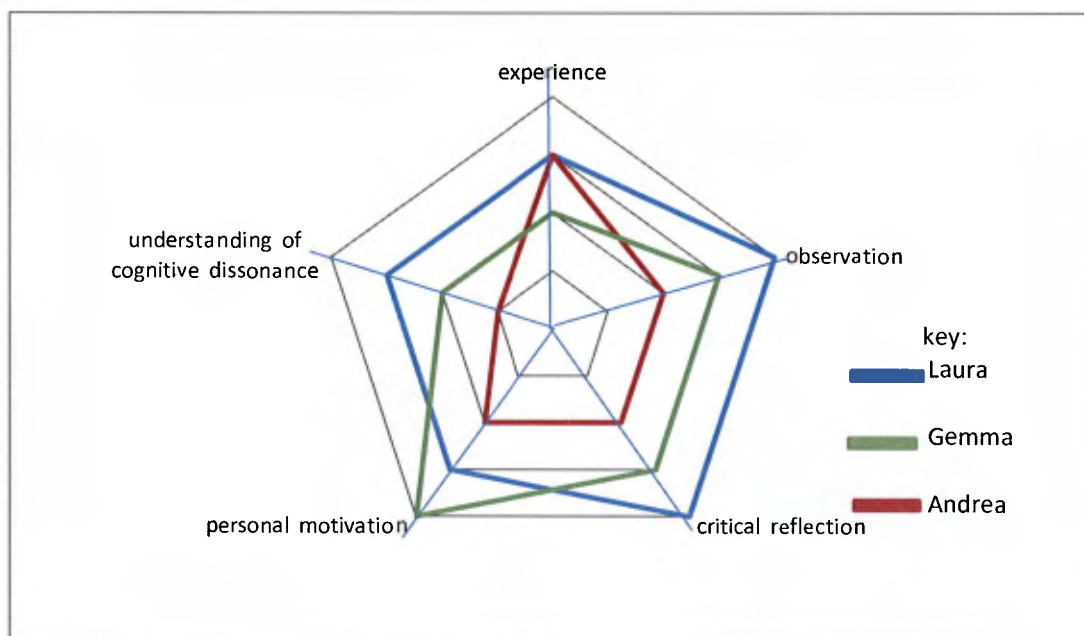


Figure 4.7: Profiles illustrating factors affecting skill in facilitation

Personal motivation or commitment: Engagement with complex adult professional learning requires personal motivation and commitment. In the context of this study that commitment took several forms. For some it meant weekly professional development as part of a Masters award. For others personal reading and updating through membership of a learning community. But for all it was less about external professional development and more about a commitment to their learners.

but in a sense I was in the right place at the right time and had the right kind of motivation and that I was sick and tired of being a year two class teacher and sending children to Key Stage2 unable to read and to me that's absolutely unacceptable that children leave the infants without basic reading and writing (Laura, interview).

A sense of moral purpose (Fullan, 2004) seemed to underpin personal commitment and motivation leading facilitators to work on their ability to observe and to critically reflect to improve their own practice.

I think I've been so wrapped up in getting them all to actually contribute and then to get somebody to build on that so much that I haven't necessarily been thinking about what it is exactly that they are saying to me when they are building on these things and that's something that I really need to work on (Gemma, interview).

Thus personal motivation was less of a factor in its own right and more of an enabler. Data showed that facilitators who felt a personal investment in their learners engaged more successfully in creating cycles of talk to lift the learners and deepen their conceptual understandings.

Critical reflection: This appeared to have the greatest impact on the facilitator and determined their level of skill. Thus, the more critically reflective, the more able the facilitator is in maintaining an overview of where the learners needed to get to by the end of the professional development period.

I think the thing is as a facilitator and knowing where the group have got to get to by the end of their initial professional development year.

You've always got to be mindful of that end point and know where they are. So there might be individuals within the group that might be quite ready but I think you've also to think about if some of the group are trying to extend members of the group, and help them get other members of the group to support that and given that a lot of the conversation was stimulated by one bit from me, rather than me having to keep asking questions I think that's evidence that perhaps they have, they are able to listen and build on each other and I think the conversation was becoming much more reflective shall we say, certainly for a number of them (Sarah, interview).

Critical reflection is not just for the facilitator. It is part of the facilitation role to support learners to become critically reflective themselves.

The situation has been set up and where the expectation is that you are open and reflective and you share all your experiences in order to go down that route and I think we were having that conversation with (name) about whether or not you could actually teach somebody to be critically reflective (Susan, interview).

There is a need in complex professional development for the facilitator to be critically reflective to manage the learning environment, dynamics and progress of their group by reflecting on their own actions, interactions and facilitation. This combined with experience enables them to move flexibly between the differing locations, levels and types of cognitive dissonance such that they can maximise the potential for using cognitive dissonance to unpick misunderstandings and make decisions on the run. These decisions are about enabling the goals for the session, those of the group and those of the facilitator to be met regardless of the particular lesson being observed. These findings resonate with Mezirow's assertion that: 'It is this interdependent relationship between experience and critical reflection that potentially leads to a new perspective' (2009, p.7). The ability to critically reflect enables the facilitator the opportunity for change over time too. This change is about a shift by the facilitator from a focus on the concrete shared experience of each lesson and each teacher towards the more abstract discussion of underpinning principles and rationales. So that regardless of the individual nature, style or approach of the facilitator and regardless of the quality or content of the observed experience, they are able to use critical reflection to shape the session to meet

their overall aims and goals. This requires flexible control over subject knowledge and a deep understanding of both the learners' current understandings and their progress towards the end goal of enabling them to be informed decision makers and problem solvers. All participants saw critical reflection as crucial for their role. They identified two parts: the first being the need to be critically reflective themselves; second, the need to support learners to become critically reflective. Despite being a skilled professional Susan experienced a huge shift in her practice as a result of becoming critically reflective which changed her perception of teaching and learning:

Once I took that on board, I think then, there were huge, still required a huge paradigm shift in how I thought about and how I went about doing the teaching. Because suddenly actually I realised that, this, the learning of this child was going to be based purely what I did, it was my responsibility so whilst it was great to have that freedom in terms of starting from the child, it was down to me and I couldn't blame the programmes of study I couldn't blame "well this the next lesson but this child's not ready for it but I still had to deliver it anyway" type of thing and then with all of that comes all that critical reflection really and I think as we dug a lot deeper into it, it was really uncomfortable sometimes just because you are taking on board knowledge that seems so obvious so why, why doesn't everyone else know about this as well (Susan, interview).

There was a sense of liberation in some of the participants at the opportunity to make the shift for themselves and others and that critical reflection was more about moving forward than regretting past actions.

Sometimes it made you feel like you'd been doing something wrong all this time and there was a better way forward. It didn't always end feeling uncomfortable did it? Quite often it was, it ended with feeling renewed about something or... yeah maybe it's like doing running records, doing it wrong recording the meaning part wrong and that was a "how could I have been so stupid!? I'm going to be responsible for helping other adults learn how to do this and I've done it wrong" but then, it was a huge moment, then actually I haven't done any damage it's ok (laughs) now I can just think about how I could phrase that and how I'm going to help other adults with it (Amelia, interview).

The use of critical reflection was a powerful tool for facilitators in improving their own practice and for informing ways for working with their learners. It seemed to be most effective when there was acute observation to inform the reflection.

Acute observation:

Previously I have discussed how observation underpinned the change in skill development over time in my skeleton model. Experienced professionals became more acute in their observations through the facilitator skill in modelling, demonstrating and using questioning at the screen to encourage articulation of observation. The groups discovered that although they were in the same room and seeing the same lesson there were individual differences in what they observed.

I also think it helps accept in some respects whatever you see behind the screen it is what it is at that moment and it may or may not be a true reflection of what usually happens we all know that but it's about professional development (Pamela, interview).

These stemmed from their emotional, physical and mental position in relation to the observation opportunity (Figure 3.1). The aim is that the group combine their individual observations, informed by their personal perspectives, to create a shared picture which they critique. There is a very clear expectation right from the beginning that all must observe and articulate what they see to the benefit of the whole group (Perkins, 2006). This applies equally to insights gained from an emotional or cognitive perspective. Whatever the individuals within the group are thinking as they observe they are encouraged to share and the facilitator sets up this expectation, models, demonstrates and then supports, enables and if necessary uses techniques to draw contributions from all.

At [name of centre] it was like "somebody say something" and somebody will always say something because they've got something in their heads because I suppose through her guiding it previously they know what they should be looking for what they should be grappling with or what the focus is so she'll just have to say "ok let's start talking" (Pamela, Interview).

Over time the group become more acute in their observations and can simultaneously observe, listen and contribute. The building of a shared experience is important for

group bonding. It also allows a constructive approach to building cycles of talk and levels of understanding. It feeds directly into the location and zones of cognitive dissonance. The group need to be observant to pick out details that might be congruent or dissonant with their personal practice, (zone 1). Then they need to notice discrepancies between what appears to be the espoused and ‘theory in use’ of the teacher being observed (zone 2). In zone 3 they need to observe to see details that trigger alternative explanations and in zone 4 for the detail to take them from the concrete observation into the abstract principles and concepts behind the praxis. The required shifts in the group acuity of observation are mirrored by that of the facilitator. Andrea reflected on this during her interview, identifying the power of observation and the need for facilitator and group to use it. She identifies the importance for the facilitator in recognising where the group are in terms of their learning journey and the need for the facilitator to pick up on the signals from the group to shape the learning experience:

But it was like with the ‘why did you laugh?’ and I think we notice all that stuff because we’ve been trained and that’s what we are doing all the time, training the teachers to notice things aren’t we, so probably we get better at noticing what the group are doing. You get to know your own group so you could have a situation right at the beginning of the year actually where as a experienced person, you know, you could get that puzzled look then and you would recognise that as a puzzled look and you could use that same prompt couldn’t you or some observation like that but then as you go through and you know your teachers more and more it will follow that you would be able to pick up more on their sort of signals to do something with it which comes right back again to it, if you don’t get it out there, so to speak it’s very difficult to do anything with it, its nigh on impossible to do anything with it because you are talking at them rather than trying to take them somewhere with it (Andrea, interview).

The facilitator needs to be able to observe both the group observing and the behind the screen teaching interactions whilst maintaining a clear overview of the current development of the group in terms of cognition and the longer term goals.

it's challenging because you know how far you've got to take those teachers again it's that complexity, we know how complex it is now. I feel, I wouldn't say really, really comfortable but feel happy to undertake that role (Amelia, interview).

Acute observation enables the facilitator to pick up on any reactions to what is being observed and to probe. This probing is crucial if the facilitator is to maximise the opportunity to support the learner through developing cycles of talk as discussed previously. Thus, a combination of experience, ability to critically reflect and acutely observe supported by a personal motivation seems to improve the skill of a facilitator, although this raises a question. Is it the skill of the facilitator or what is observed that is most powerful in triggering critical reflection and change in the learners? I would argue that rather than a straight answer there is a further factor to consider that impacted upon facilitation. That is knowledge and understanding of cognitive dissonance and I discuss this in the next section.

4.5.2 Harnessing cognitive dissonance as an educational resource

Analysis of data showed that participants felt able to recognise cognitive dissonance from the transcriptions and lessons. There appeared to be individual differences between facilitators in their position on a continuum between least and most skill. Previously I have posited that there were five factors which data suggested influenced this skill in facilitation. Personal motivation and experience seemed to be enabling factors.

Whereas, there were three determining factors: observation, critical reflection and knowledge and understanding of cognitive dissonance. Within the knowledge and understanding of cognitive dissonance there were three distinct requirements for the facilitator. Figure 4.8 shows how these might be related to each other. These are not hierarchical relationships. Instead it provides an artificial but helpful way of breaking down the influences for the facilitator into three aspects to be discussed in turn below.

The first challenge for the facilitator is their ability to identify cognitive dissonance. This is potentially more complex than it initially appears. Although participants felt able to identify cognitive dissonance in the transcripts and lessons, this actually requires them to recognise it in several different ways and as it occurs or is about to rather than with the benefit of reflection after the event. This requires in the first instance acute observation of both group and behind screen.

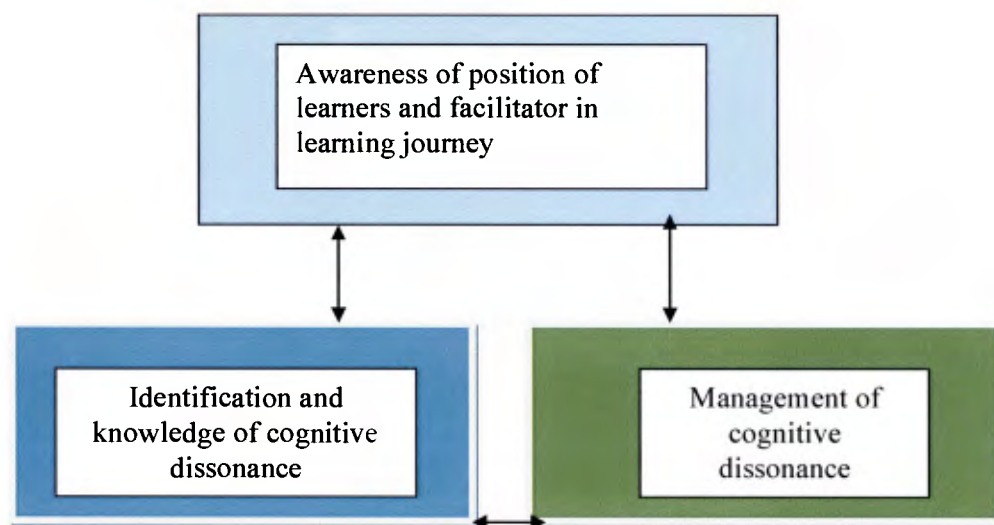


Figure 4.8: The interrelationship between three aspects of cognitive dissonance that inform facilitation role

I do try to be a bit more observant about if I see someone who looks like they were going to say something and they stop or if they come in and the dominant voice goes on and you know, I say ‘what were you going to say?’ so sometimes it does keep it going (Andrea, interview).

In many ways this could be seen as being able to identify the location of cognitive dissonance (Table 4.1). The facilitator needs to identify the location and level or zone of the cognitive dissonance as this will influence how they react or harness it. If the facilitator is unable to recognise or notice the dissonance then there is a high likelihood of the learners experiencing the risk area. They may be feeling discomforted by something observed or articulated and without sensitive handling by the facilitator may

leave feeling confused, overwhelmed and unable to resolve or work through the dissonance to a satisfactory outcome.

but sometimes I have gone away from the screen thinking I don't know what I've learned or I don't know what I can feed back and that's the spiral curriculum isn't it because you are hoping that you come back to it the next time but I have thought sometimes one little bit of the jigsaw needs to drop in here (Pamela, interview).

The next aspect is that of having an oversight of the learning journey. Whilst the facilitator grapples with observing and identifying cognitive dissonance they simultaneously need to draw upon their knowledge of the learning journey. Where are the group, as a whole and as individuals on that journey, including the facilitator? This will influence the decision making process for managing the cognitive dissonance.

at my centre there were huge silences from the (facilitator) and we sat and watched and I was thinking, I'm not just used to that and ...its popped into my mind is it Gaffney and Anderson or Lyons or DeFord who talk about (facilitator) leading a vigorous discussion at the screen and I'm thinking this isn't very vigorous but then perhaps that's whatever happens you don't know what the history of that group and maybe she decided that was what was needed at that particular time (Susan, interview).

Thus depending upon the progress in the learning journey the facilitator will decide whether to probe further, let drop or encourage and challenge. The facilitator must be a decision maker, able to make decisions about the best way to maximise learning for any learner at any given time on the run. This requires good subject knowledge, knowledge of individual and groups, personal awareness of skills and limitations and an oversight of the whole learning journey. Experience as a facilitator, which offers a repertoire of approaches, and critical reflection enable the facilitator to weigh up the alternatives and frees them to make the best decision at that moment in time, knowing that with hindsight another alternative might present itself and from which they will learn for future decision making. Susan summed it up as: 'What I need to do is just step right back and say right what is going on and what is the best thing?'(interview).

The difficulty with identifying dissonance is that there is little that provides a framework for pinning it down. However, data consistently suggested that cognitive dissonance was individual and internal although it could be recognised by the reaction either physical or emotional or both. A combination of experience and acute observation seemed to make it easier for facilitators to recognise cognitive dissonance or to recognize a prime location for it and therefore to anticipate and lead the group so that the cognitive dissonance was easier to recognise or that they enabled the group to express it. Andrea reflected on how she might manage the process:

well I mean it would be just lovely if you could just say to any group at any point “you’re looking puzzled” because of course you could do that because nobody would know if anyone was looking puzzled (laughs) actually there’s a way forward, try that at every session, “You’re looking puzzled” (little voice and laughs), but there’s something dissonant now because if you did that early on what they would be puzzled about could well be something very straight forward procedure but then to get it out there, that makes sense doesn’t it, yeah and then the others would say “well I don’t do it like that” and then you think whoops (laughs) well yeah, there’s an ah ha moment! Isn’t it! (Andrea, interview).

The third aspect was how the facilitator managed the cognitive dissonance through the decisions they made at the time. This management relied upon the facilitator’s understanding of cognitive dissonance and their knowledge of where the group were in relation to the overall learning journey. Thus a facilitator has to take all of these things into account to inform the decision that they make instantaneously. An acute observer might notice the occurrence of cognitive dissonance, recognise the level and location and decide to:

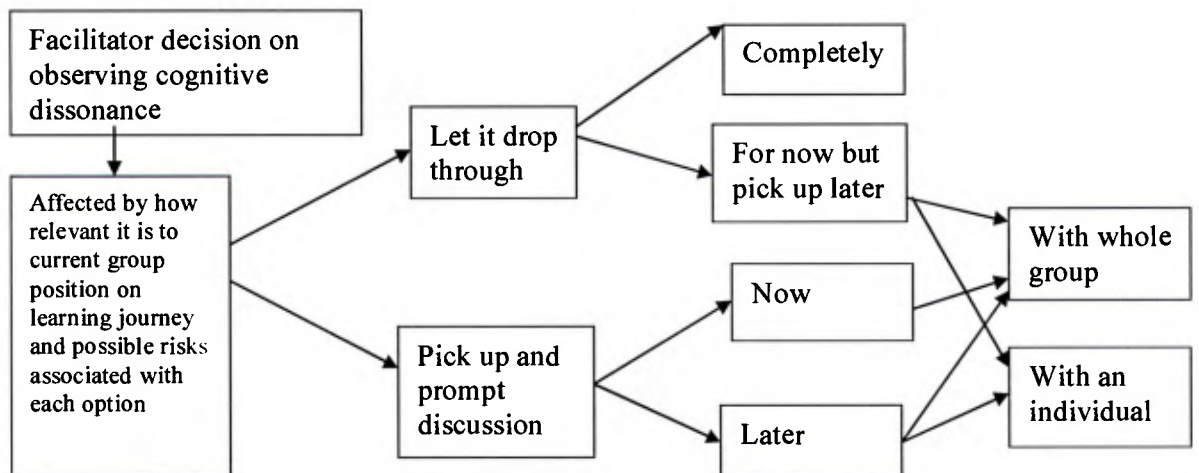


Figure 4.9: Decision process by facilitator in managing cognitive dissonance as it occurs

There are risks associated with each decision. If the facilitator chooses not to pick up and discuss the cognitive dissonance there is a danger that a fundamental misunderstanding might develop that will impact upon praxis. Equally, the discomfort created by the experience of cognitive dissonance might affect the learner's motivation and ability and hinder their progress. In extreme cases this can lead to learners leaving the professional development programme (Galman, 2009). The facilitator has to decide whether the cognitive dissonance is affecting one or several learners and the impact of this on the current session or subsequent learning. Weighing against is the possibility that in picking up the issue it reduces time and opportunity for discussing something that might have a greater impact for the learners at this stage of their development.

I just wanted to stay there and figure it out because I felt that if I didn't figure it out then it would float away, it would be gone whatever train of thought I had would be gone and that's really annoying (Pamela, interview).

Knowing where the next steps are for each learner and the group within the bigger learning journey enables the facilitator to decide whether to pick up the issue in a whole group or to use opportunities for working on a one to one basis to pick up the issue with an individual at a later point. Much of the management of an apparently cognitively dissonant incident appears to be associated with risk management. Facilitators need to

weigh up the risks for learners and their transformation by not dealing with their experience of cognitive dissonance or the risk that in discussing the cognitive dissonance they miss an opportunity for building a bigger principle towards more powerful learning. The key to the decision making process appears to be in the facilitator having an understanding of what will have the greatest impact and enable the biggest shift in learning for each individual and the group. This seems to be based upon their personal ability as facilitators to recognize, manage and critically reflect on cognitive dissonance as an educative resource within the professional development process.

4.6 Summary

This study set out to explore cognitive dissonance as an educative resource. Its aims were to work towards greater clarity in recognising and identifying features of cognitive dissonance in professional learning, to contribute to understanding transformative processes to improve praxis and to build on previous research into the concept of cognitive dissonance. Data were analyzed using a grounded theory approach producing findings which I have organised into two inter related areas: cognitive dissonance and the facilitator role. Using these data I constructed a conceptual model which shows the relationship between facilitation, and zones of cognitive dissonance. The model (Figure 4.4) suggests a section where the use of cognitive dissonance is most effective. This area is predicated upon the role of the facilitator and their ability to recognise cognitive dissonance as it occurs, make decisions about how best to manage the cognitive dissonance within the wider picture of the learning environment and position of learners within the professional development programme. This decision making process is complex. It relies upon facilitators being acute observers, able to move flexibly between zones of cognitive dissonance to harness it as an educative resource for professional learning. To do this they need to keep the overreaching principles of the professional

development and its end goals in mind whilst making use of cycles of talk to engage learners in critical reflection. Tussling with understandings in a supportive environment led by a skilled facilitator enables learners to problem solve and to transform their perspectives. From these findings I argue that cognitive dissonance both naturally occurring and deliberately introduced through skilled facilitation can be a powerful resource in complex adult learning. I suggest that this has implications for praxis which are discussed in Chapter 5.

Chapter 5:

Implications for praxis in diving for pearls

5.1 Introduction

Errors, like straws, upon the surface flow; He who would search for pearls must dive below. (John Dryden - 1631–1700 - *All for love; or the world well lost: a tragedy: Prologue*)

The pearl analogy remained powerful for me throughout this study. Like the production of a pearl, the phenomenon of cognitive dissonance appears only to be observable through the behaviours and responses it produces and it seems to be an individual and internal process. Yet the manifestation of behaviours from a cognitively dissonant experience suggests valuable insights into a learning process might be found if a deep enough exploration is employed. This chapter aims to dive into the data and interpretations to draw out my insights and discuss these within a framework of themes. These themes were identified in the preceding chapters and focus on transformative learning, professional learning, critical reflection, the role of the facilitator and the learning environment in relation to cognitive dissonance as an educative resource. In discussing the findings in relation to these themes it is also important to consider the prism adopted to explore the phenomenon of cognitive dissonance: activity orientated to dissonance reduction; perspective transformation and adult behaviours. This chapter pulls together these themes to discuss how this exploration of cognitive dissonance as an educative resource in complex professional learning might support increased understanding of cognitive dissonance through a clearer identification of features and characteristics. In turn, I suggest that there are implications for praxis in professional learning that can be drawn and specifically for the role of the facilitator and the learning environment.

5.2 Cognitive dissonance in professional learning

The use of cognitive dissonance is explicit in the professional development programme observed in this study. Thus from day one of the programme participants have the possibility of encountering cognitive dissonance coming from multiple sources including:

- Potential conflict between their theory of early literacy and that presented in the programme readings.
- Tension between their personal professional identity as an early literacy expert and with being a novice on a new learning journey.
- Possible tension between the practical application of theory to praxis based on their previous experiences as experts.
- Mismatch between their expectation of curriculum delivery and the model of the professional development programme.
- Mismatch between observations and praxis behind the screen across several levels.

These experienced education professionals find themselves being challenged on their knowledge, understanding, application and skill in teaching early literacy. Furthermore, they may find their identity, personal and professional, and their understanding of what it is to be a learner, conflicting with the experience of a constructivist approach to adult professional learning. These potential experiences of cognitive dissonance occur throughout the year long professional development programme and exist within the curriculum design itself, through the choice of readings and timings of learning experiences in the schedule and the use of live lesson observations as an integral part of the programme. Over time participants themselves come to identify and use the term cognitive dissonance within their discussions and personal reflections:

that cognitive dissonance feels like the norm this last year and like this week..., I remember thinking I don't feel as challenged, not challenge as uncomfortable, I don't feel like I'm struggling as much with my thinking and that was a bit odd. I had cognitive dissonance over about not having cognitive dissonance (Pamela, interview).

Facilitators are also able to introduce or exploit opportunities for learning through cognitive dissonance by their decisions regarding leading live lesson observations at the screen and using prompts, triggers to challenge and lift understanding. So it appears that there are multiple opportunities for both individuals and the group as learners to experience cognitive dissonance. However, just the experience of cognitive dissonance or being challenged about praxis, identity as an expert literacy teacher, or theoretical understandings does not mean that the cognitive dissonance is an educative resource. Data analysis described in chapter four raised further questions for exploring cognitive dissonance as an educative resource. As in nature not every oyster produces a pearl and not every pearl is equally valuable. It seems that whilst cognitive dissonance occurs within professional learning, further interpretation is required to consider what it is that shifts the cognitively dissonant experience from discomfort to an educationally powerful one which results in new learning. Initially two possibilities emerged from the data analysis. The first possibility was if using cognitive dissonance as an educative resource, accessing it relied upon setting up situations where it not only occur but also could be observed. Second, was whether the power of cognitive dissonance as a resource lay in enabling facilitators to become acute observers able to 'see' cognitive dissonance and in recognising it use it as a resource. I rejected these possibilities because cognitive dissonance was observed to be present in all the cases, and from the data I was able to create a seemingly comprehensive list of possible ways in which cognitive dissonance might occur. Rather than needing to be created, cognitive dissonance was naturally present, but the opportunity for facilitators to use it or to recognise and identify it was a different matter. The observation of cognitive dissonance raises a tension. As a phenomenon, it is not possible to 'see' and therefore observe cognitive dissonance. But it does appear possible to observe the manifestations whether physical, emotional or both of those experiencing cognitive dissonance. However,

facilitators can and do become acute observers able to recognise signs of cognitive dissonance in their learners (Chapter four). Laura found that once her learners became more independent in observing and contributing behind the screen she was able to step back which

allows me to be much more observant and to see where they are rather than constantly having to step in and monitor and lead (Laura, interview).

Laura's experience was typical in that as facilitators supported their learners in becoming skilled observers themselves, there was an impact upon praxis: 'But we have to look at what we see and build our knowledge from what we see' (Lesson 1, centre Avalon). This echoes Lyons, Pinnell and DeFord (1993):

Watching one another teach and talking aloud as they do it increases their observational powers and helps to link their understandings into a self-extending system that supports quick decision making (p. 202).

However, just being able to recognise cognitive dissonance in itself is insufficient for cognitive dissonance to be employed as an educative resource. The educative resource aspect only comes into play if that recognition is harnessed in some way. In my previous research I proposed three possible outcomes from a dissonant experience: denial, affirmation of previously held constructs, or new learning (Ince, 2010). These outcomes were predicated upon the commitment and motivation to reduce the dissonance (Festinger, 1957) and the engagement in cycles of critical reflection tussling with cognitive dissonance until a satisfactory conclusion had been reached (Ince, 2010). In supporting the most positive outcome of new learning from a cognitively dissonance experience, it is less about the actual dissonance and more about how it is managed. Therefore, whilst facilitators might be involved in creating or being more consciously aware of the opportunities from cognitive dissonance in professional learning, they might also engage in becoming acute observers and enabling their learners to do so too. These hypotheses seem less helpful in determining cognitive dissonance as an

educative resource. Instead I propose a new hypothesis deduced from this study to explain how cognitive dissonance might act as an educative resource.

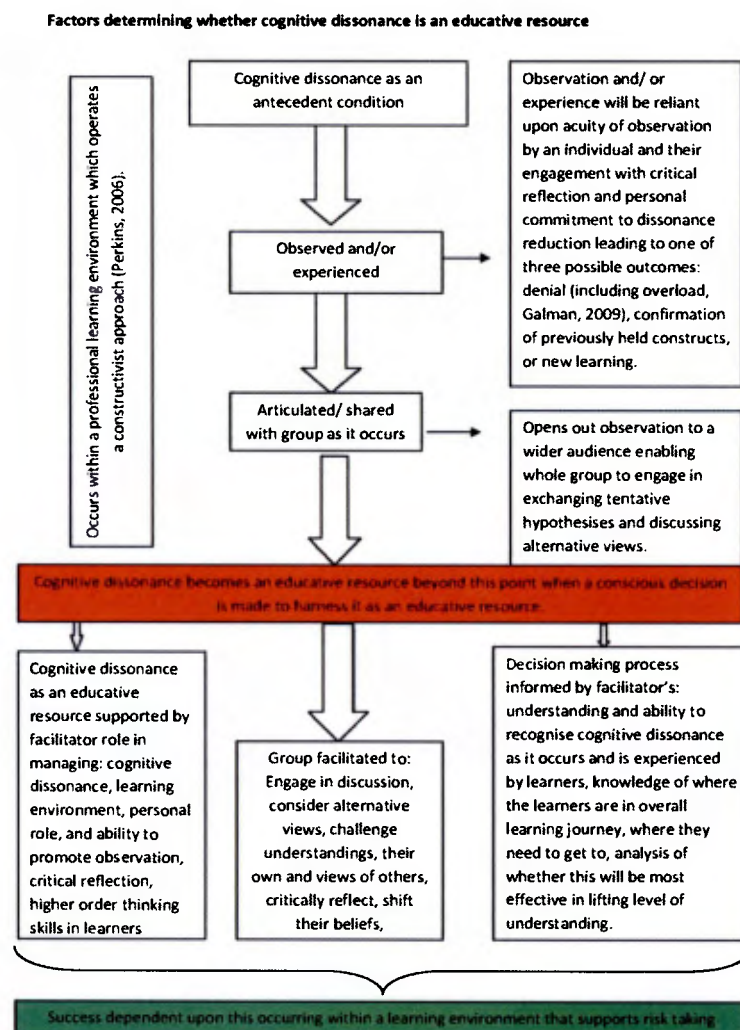
5.3 Powering up cognitive dissonance as an educative resource

Understandings and recognition of cognitive dissonance are extended by this study.

Cognitive dissonance is identified as individually experienced, although within a group several may experience a similar or unique form of cognitive dissonance simultaneously. Some may have a physical, emotional or combined reaction that can be detected by an acute observer through their body language, way of speaking or other indication. These experiences will be time sensitive according to where the individual is in their personal learning journey and in relation to the wider goal for the professional development programme. The likelihood of this experience contributing to new learning and perspective transformation is linked to the engagement in critical reflection and personal commitment to dissonance reduction. This study sheds light on the phenomenon of cognitive dissonance but further interpretation is required to explore whether cognitive dissonance acting as an educative resource creates the pearl of new learning. I suggest it is how cognitive dissonance is facilitated and managed within the complex professional learning environment that shifts it from a potential irritant for adult learners to 'pearl for learning' as an educative resource. Figure 5.1 shows the relationships between factors determining whether cognitive dissonance can be considered as an educative resource. Within a constructivist approach to professional learning it seems that there are manifest opportunities for cognitive dissonance to occur. Transcripts from the recorded lessons showed possible examples that were not identified or pursued by the participants either at the time or subsequently in the semi-structured interviews and discussions of their annotations. These instances, which in challenging learners' constructs can be construed as disorientating dilemmas (Mezirow, 2009) might have been overlooked for two main reasons: the ability of the facilitator to

identify and recognise them as cognitively dissonant, recognition but dismissal as opportunities for use as an educative resource.

Figure 5.1: Factors determining whether cognitive dissonance is an educative resource



In the first, recognition of cognitive dissonance was affected by the facilitator's observational acuity, experience, level of engagement and focus at time, personal commitment, and ability to critically reflect, which in this context might be seen as the

ability 'to make rapid judgements in problematic situations' (Saltiel, 2010, p.132). One participant reflected on the lesson afterwards:

so I was thinking that either I'm not directing them in the right way or I'm asking them the wrong questions (Gemma, interview).

The second situation, whereby cognitive dissonance is recognised as it occurs but is dismissed as a learning opportunity suggests two possibilities. One is that the facilitator makes a decision that the cognitive dissonance is not compatible with the goals for the session. This might be because there is a mismatch between the type and level of cognitive dissonance (Chapter 4, table 4.1) and the position of the learners on the continuum of their understanding and learning journey. For example: the extract below shows learners discussing their understanding of familiar reading (Chapter 3). They are observing the first part of a lesson and have started a discussion between themselves. The facilitator (F) could pick up on their use of 'confidence' and understanding of familiar reading within the lesson structure. She could probe their ability to articulate any misconceptions and extend the discussion. Instead she makes a decision to cut the conversation off to take them back to the bigger picture, the lesson focus, in this case prediction of the child's progress.

Jill: So I always thought that familiar reading was to give them confidence. Reading a book that they're so confident with it that it boosts them up at the beginning of the half hour to think, right, now, not literally but you know what I mean.

Mel: I know what you mean.

Sandy: I can really get reading now, I can tackle something a little bit more tricky and then I can learn something, but maybe I've got that wrong. This isn't, I'm not making a statement, I'm...

F: Where are you seeing the predictions of progress? What she's focusing on in this lesson?

(Lesson 1, centre Avalon).

Her decision is based on knowledge of where the learners are, that position in relation to where they need to get to by the end of the professional development programme, and

what will have the greatest pay off in lifting their level of understanding at this point in time, or as the facilitator reflected subsequently:

I suppose, I'm being very much led by the teachers and what they are showing me and where I think they are on their learning journey and what they can actually cope with (Laura, interview).

An alternative explanation might be that whilst the facilitator recognises the cognitive dissonance they are not sufficiently confident to manage it in a way that enables the learning goals for that session and those learners to be enhanced. This alternative explanation highlights two emerging factors that appear to be determinants in whether an occurrence of cognitive dissonance is adopted as an educative resource in professional learning. These are the role of the facilitator and the learning environment. First, I explore in more detail the implications for facilitators. Then I move onto discussing the learning environment in relation to the facilitator role within it and the use of cognitive dissonance. Finally, I propose specific suggestions for praxis as a result of this interpretation.

5.4 Liberating learners: the role of the facilitator

Discussion in Chapter 4 set out factors that affected the role of the facilitator in harnessing cognitive dissonance as an educative resource. The focus was on what the facilitator had to do in order for their learners to make progress and to engage in a transformative learning experience. For example: facilitators needed to shift learners from low level procedures to higher level functions and understandings about literacy acquisition and teaching. My hypothesis of how and when a cognitively dissonant experience might become an educative resource required rounds of analysis. This showed that alongside the roles for the facilitator including supporting acute observation, developing dialogue (see Chapter 4) there was also evidence for how facilitators worked. A relationship emerged between what the facilitator role involved (see Chapter 4) and the facilitators' adopted ways of working in order to best support

their learners. Despite the differences in facilitator profiles (see example Figure 4.7) and their different positions along a continuum of facilitator skill, consistencies appeared in how they identified facilitative approaches. Figure 5.2 shows a representation of how the ‘what, how and why’ that drive the facilitator decision making.

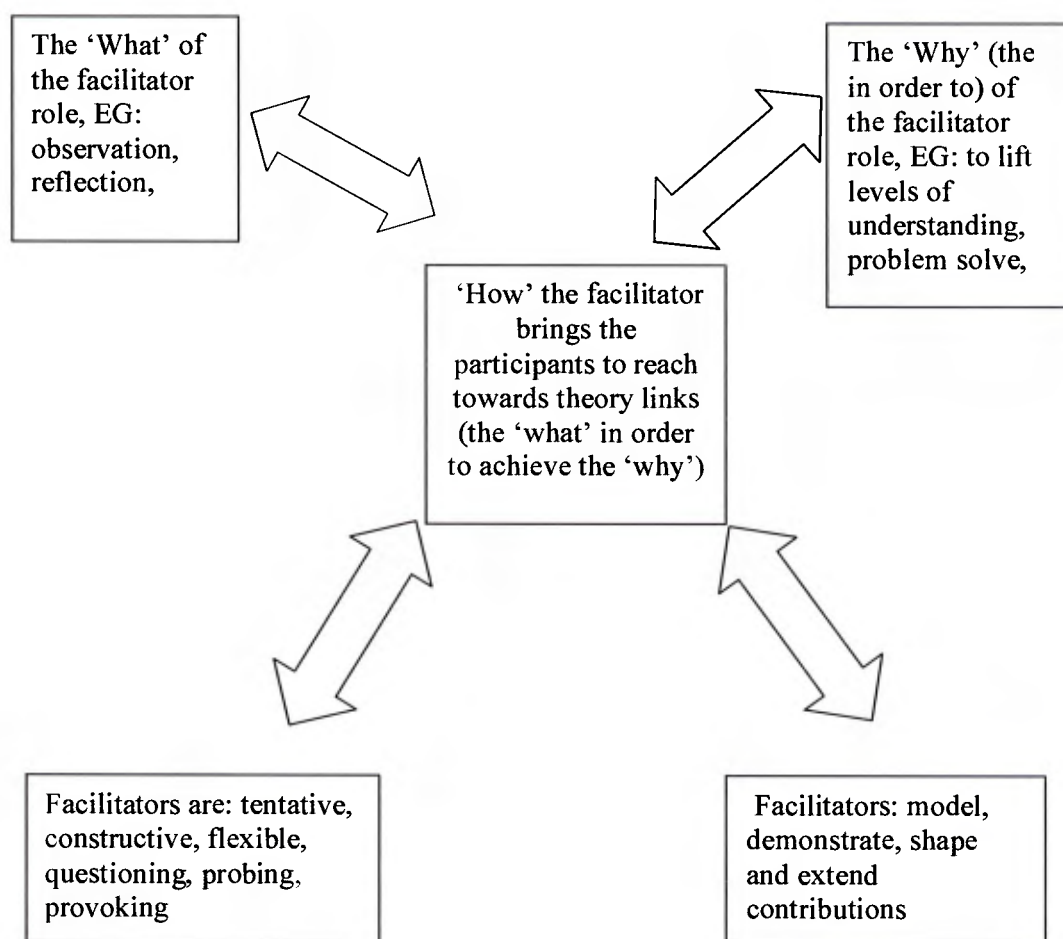


Figure 5.2: The relationship between the role of the facilitator in supporting learners and how they do that in order to enable learner progress.

The ‘what’ of the facilitator role, as discussed in Chapter 4, focuses on shifting from procedures to behaviours and understandings in a flexible manner that recognises the current position on the learning continuum of participants and their progress goals for the end of the PD programme. The ‘why’ focuses on the process and outcomes for learners from the professional development programme. This will include the stated

aims and objectives of the programme which materialise into the perspective transformation that facilitators might be trying to support. In the particular context of this study, this included enabling participants to become independent decision makers and to fulfil a particular professional position as teacher-educators working as facilitators supporting teachers in early literacy teaching and learning. The facilitator role (the 'how') arose from the data and a consistency of approach by facilitators in what they did and why. Specifically, facilitators in this study identified ways of working or approaches that they felt were supportive of the goals of the programme and which they believed enhanced their role. They felt the approaches empowered learners to become independent decision makers and problem solvers, and enhanced the outcomes for them. There was a shared pedagogical approach which valued tentativeness, exploration of alternative views, positive outcomes and was constructive, also including the modelling of appropriate language, and incorporating use of specific 'technical' terms. This approach resonates with Schugurensky's discussion of the goals of transformative learning where he proposes 'one of the main goals of transformative learning is the development of more autonomous thinkers who can justify their choices or reasons' (2002, p.64). Enabling learners to become empowered is not easy. In the extract below Sarah is clear that the level and type of contribution was not what she wanted from her group at that stage in their learning journey and was not conducive to transforming perspectives.

the way that conversation was operating was not where I would want them to operate with their own group or I would want them to anticipate their group of teachers would operate. So I was trying to model, I guess and get from them the more positive constructive hypothesising rather than the negative I wouldn't even call it hypothesising that they started doing, initially it was just "you shouldn't do that" and it was quite for me, dogmatic and I didn't want that (Sarah, interview).

The goal for facilitators was that the contributions made would be tentative, mirroring the tentative nature of hypothesising and encouraging learners to share alternative views

which if voiced in a tentative manner could be considered and possibly rejected without criticism of the individual, but together creating a community of decision makers.

Schugurensky describes this as:

....a process in which we actively dialogue with others to better understand the meaning of an experience. It involves assessing the reasons and the evidence advanced to support an argument. This in turn promotes a better understanding of issues by tapping into collective experience and knowledge and allows all participants to find their own voice in the light of alternative perspectives (2002, p,65)

His description could be adopted as an articulation of the goal of the facilitators in their approach to supporting the learners, and is echoed by Andrea who commented:

well I would hope the ones who are doing it a little bit questioningly have taken on board the tentative nature of what we see, (interview).

But the experience of Sarah suggests that it is not easy and Schugurensky agrees that it is a challenge:

to replace oppositional with collaborative dialogue, transforming self serving debates to careful listening and informed, constructive discourse. A second challenge is to find the most appropriate strategies and locations to promote the development of active, socially responsible, democratic, and caring citizens who have the competencies to engage in collective decision making (*ibid*, p.64).

And yet emerging from the data, this seems to be the approach implicitly adopted by the facilitators with varying degrees of success according to their own skill. The challenge for facilitators was moving learners from oppositional and self serving debates towards the tentative and collaborative. The study showed that facilitators modelled contributions to the observational discussion behind the screen, and valued tentativeness. They worked to find strategies that supported the shifts identified as helpful. This included introducing specific terminology to build a shared construct.

I actually used the word “dissonance” with the teachers which, I hadn’t planned on doing and it’s not something I’m sure I’ve done before, but actually kind of, it’s, it’s like at the beginning when you start doing the

assessment training and the early lessons, that the teachers are overwhelmed by the “Clay speak”² and actually I threw this word “dissonance” in there and they coped with it and they kind of got the idea that it’s just this bit of tension, and I think, that’s the first time I’ve been aware that I’ve actually used that level of vocabulary with them (Laura, interview).

Other vocabulary was identified by facilitators as unhelpful in building shared constructs and was sensitively but purposefully addressed to support a more collaborative discussion. For example in the extract below the facilitator is recounting how she managed a shift in one of her learners from them using the word “I” which she felt was unhelpful as it indicated the learner lacked understanding about the programme and was implementing her own version without recourse to theory.

But she has come, yes she has come round like I said, but from early on it was that “I” word. “I have been doing this and this and this” and I know for a fact that isn’t in the procedures anywhere.....Put it this way I didn’t say “no you can’t do this”, you know, I said “I think it would be really helpful if you looked in the standards and guidelines part and perhaps just quoted from there for your governors” and that sort of thing (Andrea, interview).

The importance placed upon terminology by facilitators was clear from the consistency across data and the examples cited by participants in supporting their views. It also echoed the importance of discourse within Mezirow’s process of transformative learning even though there were no examples of facilitators explicitly referring to transformation within the data (Mezirow, 2009, p.94). Instead facilitators often attempted to create a trigger for transformation by the way they shaped the discussion at the screen and the way they used questions to probe. This questioning was seen as a key part of the facilitator’s role and their ability to probe their learners to lift the level of understanding was identified within and across data. Analysis of the data identified

² “Clayspeak” refers to Marie Clay, author of texts used by teacher-educators to support the teachers. The texts refer to theory of continuous text and make explicit links between theory and practice at times using a “technical vocabulary” which is new to teachers (Clay, 2002,2005).

specific terms that seemed common in their usage across facilitators to describe how they used questioning to probe their groups. The analogy of digging was the most common with alternatives such as tussling, problem solving, and grappling used to describe how they tried to prompt their learners into deeper critical reflection of what was being observed and their understanding of it. The extract below shows how learners responded:

because you talk about something so much that you, you just unpick everything you don't know, like I really thought I knew what fluency meant and then we had sessions here when and we talked and we dug deeper and deeper you could sit there and think "do I even understand what it means?" (Centre Duchy).

This approach whilst potentially frustrating for learners often acted as a trigger or as a provocation whereby learners were pushed, almost forced into confronting challenges to their existing constructs. Fullan describes this as: 'There is a time to disturb and a time to cohere' (2004, p.167). Knowing which is which and enabling learners to become empowered to confront challenges independently is an important part of the facilitators' role. Participants in this study recognised the power of problem solving for themselves with Amelia reflecting:

There's been big moments where we are watching a lesson at the screen and really tussling with an idea and we've felt uncomfortable because the lessons coming perhaps getting close to the end and you're thinking I haven't found the thread that goes through this lesson and what we need to how we are going to help this teacher but normally shortly after that something comes out of that lesson from that discussion that we are having and we are pushing each other (interview).

The importance of shaping contributions, as a model, a shared vocabulary, an opportunity and way of exploring and constructing alternative views was one aspect of how facilitators felt they supported the 'what' and 'why' of the learning. The design of the programme also supported the facilitator role. Amelia's reflection, above, illustrates how the professional development programme of this study offered what Darling-Hammond characterises as useful:

The content of professional development can make the difference between enhancing teachers' competence and simply providing a forum for teachers to talk. The most useful professional development emphasizes active teaching, assessment, observation, and reflection rather than abstract discussions (1995, p.85).

The context chosen for this study provided a complex model of professional development which did indeed offer more than a 'talking shop'. Professionals at whatever level were challenged and provoked by what they observed and how they were facilitated to critically reflect and discuss their interpretations within a constructivist approach to professional development. From my interpretation of data I argue that not only is the facilitators' role complex but multifaceted. They must bring and build personal motivation, commitment, and moral purpose according to Fullan (2004). Facilitators operate as acute observers, critically reflective, skilled professionals able to enable others to become critically reflective, acute observers for themselves, whilst keeping a clear oversight of the learning journey and each individual's progress. Simultaneously, facilitators need secure subject knowledge, good pedagogy including a constructivist approach to adult learning (in this context). Furthermore, they need to be able to manage contributions skilfully as a tool for learning and as a motivator. Finally, they need to be able to recognise cognitive dissonance as it occurs and to make moment by moment superb decisions (Clay, 2005) about whether to let things drop or to pick them up provoking responses and engagement through the use of cognitive dissonance as an educative resource. Thus 'educators assist learners to bring this process into awareness and to improve the learners' ability and inclination to engage in transformative learning' (Mezirow, 2009, p.94). The complexity of role operates in a symbiotic relationship with the learning environment which according to Schugurensky:

This brings us full circle back to transformative learning theory, which contends that transformative learning requires supportive relationships and a supportive environment that encourages a sense of personal efficacy, (2002, p.71).

5.5 A risky business: the learning environment in complex professional learning

At the heart of the professional development programme for this study was a learning environment which actively engaged all participants with clear expectations that they would share their observations and insights in real time for the benefit of all.

Consideration of the facilitator role as already suggested casts them in the key role of developing the learning environment. Facilitators' mediation of learning through discussion and the decisions they make are inseparable from the climate for learning they engender or as Brown states:

For educators this means that the learning environment is not simply the location of learning, as widely construed, but the set of conditions that enable and constrain learning (Brown, 2009, p.5).

In this study there was a very specific physical environment illustrated in figures 1.1 and 4.8 and for brevity dubbed 'behind the screen'. This location and context of the actual physical set up; high stools or chairs looking through a viewing screen into a small teaching room, is the same in each PD centre (RRNN, 2006). This provides a consistency of physical environment for the data collection and observations. It also enables the focus to be on the learning that this physical environment supported.

In selecting this, a conscious decision was made that any emergent focus on the learning environment whilst acknowledging the physical set up, would be on the climate for learning. This has echoes with Roskos and Bain (1998) and their focus on identifying features that supported professional development in learning environments. Whilst Brown (2009) proposed that:

the learning environment should be structured so that it best enables particular learning of knowledge, skills, attitudes and values, that constraints to this are minimised or absented, and that other learning is constrained (p.30-1).

Facilitators are key in how this is achieved. From previous discussion it seems that risk is important. There are the risk areas for learners created in part by lack of skilled

facilitation. But perhaps more fundamentally, learners need to take risks in ‘surfacing and animating’ (Perkins, 2006, p. 40). Creating a climate for learning that supports risk taking appears to be crucial for a social constructivist approach, as explicitly promoted by the professional development programme of this study, to successfully operate. The perceived risk by learners seems to centre on a risk to their personal and professional credibility by being ‘wrong’ in some way. Engaging with this was seen as a risky business by both facilitators and learners and one which required thought. Data suggested reluctance by learners to offer their views and facilitators interpreted this and took responsibility.

I would just like them to be able to say something and to share their ideas but I think they are a little, they seem a bit nervous sometimes it’s about getting it wrong and you know I suppose that’s you know they are still on that right and wrong which is possibly also coming from me (Gemma, interview).

The responsibility was two-fold. Facilitators wanted contributions so that assumptions and tacit knowledge could be brought to the surface and discussed (Perkins, 2006). So facilitators felt that it was their questioning or probing that was at fault if this didn’t occur. But they also recognised that creating a safe environment was important in order to get contributions.

I think it was done really well because I remember feeling very nervous about it that first time and feeling nervous then you encouraged us to take risks. Realised that actually it was okay to do that within a group nothing is going to go wrong if you start discussion that doesn’t go anywhere you can change what you’re talking about (centre Duchy).

Participants reflected on things they had observed and models of how they as facilitators themselves might progress and enable change over time in their learners through the way in which they interacted:

I think it’s also when you’re aware that they are calling for you to do more. “Well done for your contributions last week, this time I want you to do this” and you begin to become aware of the complexity of what you are doing (Amelia, interview).

Lisa was very good at that wasn't she? She always used to make comments afterwards and at beginning of the session, "last time you were very good at" (Susan, interview).

First, facilitators positively valued contributions by learners to encourage them to continue to share observations and insights. Facilitators saw their role as encouraging but also setting clear expectations and supports and they drew on their personal experience of how this was done.

but it was scaffolded we all had a go and we had a group that we all trusted (Pam, interview)

we were told what we'd done well and then you set goals didn't we for what to do next time and what to focus on (Amelia interview)

These approaches to creating an environment that enabled risk taking, in the sense of sharing observations, insights and then alternative interpretations created a sense of community whereby participants felt able to acknowledge and admit to not knowing in a way which was counter intuitive to their previous experiences as education experts:

but it's still not about knowing the answers to everything and actually it's as ok now as it was at beginning of year to say I don't know let's have a look and examine what's going on, what do you think is going on? (Susan, interview).

That safety in belonging to a community was crucial for the learners if the facilitators were to make the shift to provoking responses by playing devil's advocate and using cognitive dissonance as an educative resource. Sarah reflected that once her group were risk takers she could exploit dissonance to move her learners forward.

The group had become risk takers and happy to challenge..... And so I think it was me that was calling for some constructive support for the teacher and ways of supporting the teacher to take the child forward so that all came from that ..beginning where there seemed to be some dissonance between what the teacher had said about the child and what the group were noticing (Sarah, interview).

Key components for a climate for learning emerged. The first of these was the crucial role of the facilitator in modelling how to behave within that environment. The behaviours expected included observing and articulating or listening simultaneously,

contributing in a constructive, positive and tentative manner. With the expectations of behaviour and contributions came the safety of being part of a community that enabled risk taking.

Because as a group somebody comes up with something and then if they are able to vocalise it in the group it's ok (centre Duchy).

These feelings of community and shared experience resonate with Mezirow's stage 4 of perspective transformation (2009, p. 94) and Poutiatine's stages 6 and 7 whereby there is an element of risk and sense of a loss of control (2009, p.92). Professionals do encounter risk to their personal identity and knowledge constructs when they embark on new learning and being able to let go of previously held firm beliefs within a supportive community seems to make it a slightly easier process, as does sharing the experience and seeing others in a similar situation.

I think it's great but because of the context in which it happens is really supportive which is important and because we all know are all going through it and we are all at different stages of understanding different aspects (Pam, interview).

The environment was not just about the facilitator. There was a need for the learners to engage too. This need is affected by a range of factors. Perkins (2006) identifies learners' personal approaches as important within a constructivist approach. He identifies the challenges of cognitive demands which not every learner is comfortable in assuming. These challenges impact on the learners' level of engagement, systematic and deep or superficial and less systematic with outcomes to match. Other studies on cognitive dissonance identify engagement as key. They investigate relationships between student expectations and understandings of learning and factors which make this consonant or dissonant and the resultant outcomes (Cano, 2005; Brindley, Quinn and Morton, 2008). From these studies it seems that learner engagement is important and operates at several levels. On one hand there is the basic engagement with the professional development programme, to turn up and participate. But beyond this level

of engagement there can be dissonance between learner expectations and the learning environment (Postareff, Katajavuori, Lindblöm-Yliänne and Trigwell, 2008), the teaching approach and their preferred study approach (Vermunt and Verloop, 1999). In this study participants at every level had made a choice to participate and the ‘behind screen’ learning environment was new to all but the moral imperative (Fullan, 2004), acted positively on their commitment as they all wanted to improve the literacy of young children and saw this professional development as the opportunity to do so. However, a constructivist approach to teaching was not necessarily their expectation and was ‘a different system’ (Amelia, interview) to the characteristic didactic short courses experienced by participants (Bangs, Macbeath, Galton, 2011). Previous research (Ince, 2010) proposed a learning environment that valued critical reflection and in which cognitive dissonance was both created and reduced by the actions of the facilitator working with learners, Figure 5.3.

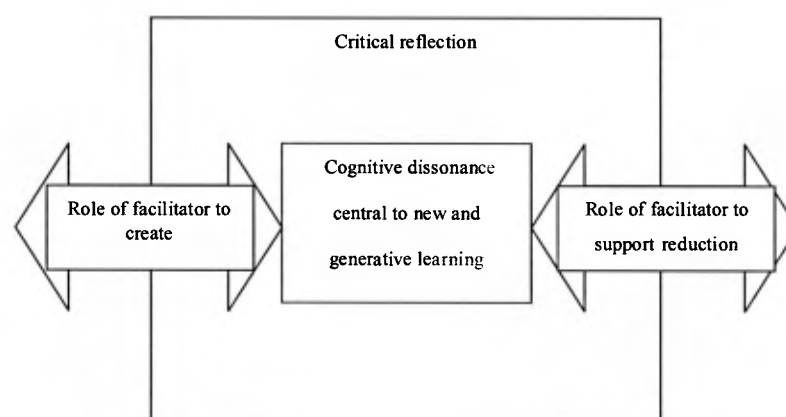


Figure 5.3: Ongoing relationship between facilitator role in creating cognitive dissonance and supporting its reduction within a learning environment that values critical reflection

Data from this study suggest that that model might be updated to recognise the role of the learners in creating and engaging with a learning environment that supports risk taking, values critical reflection, acute observation and personal motivation within a

constructivist approach to learning. Figure 5.4 proposes a model of how this learning environment might be represented.

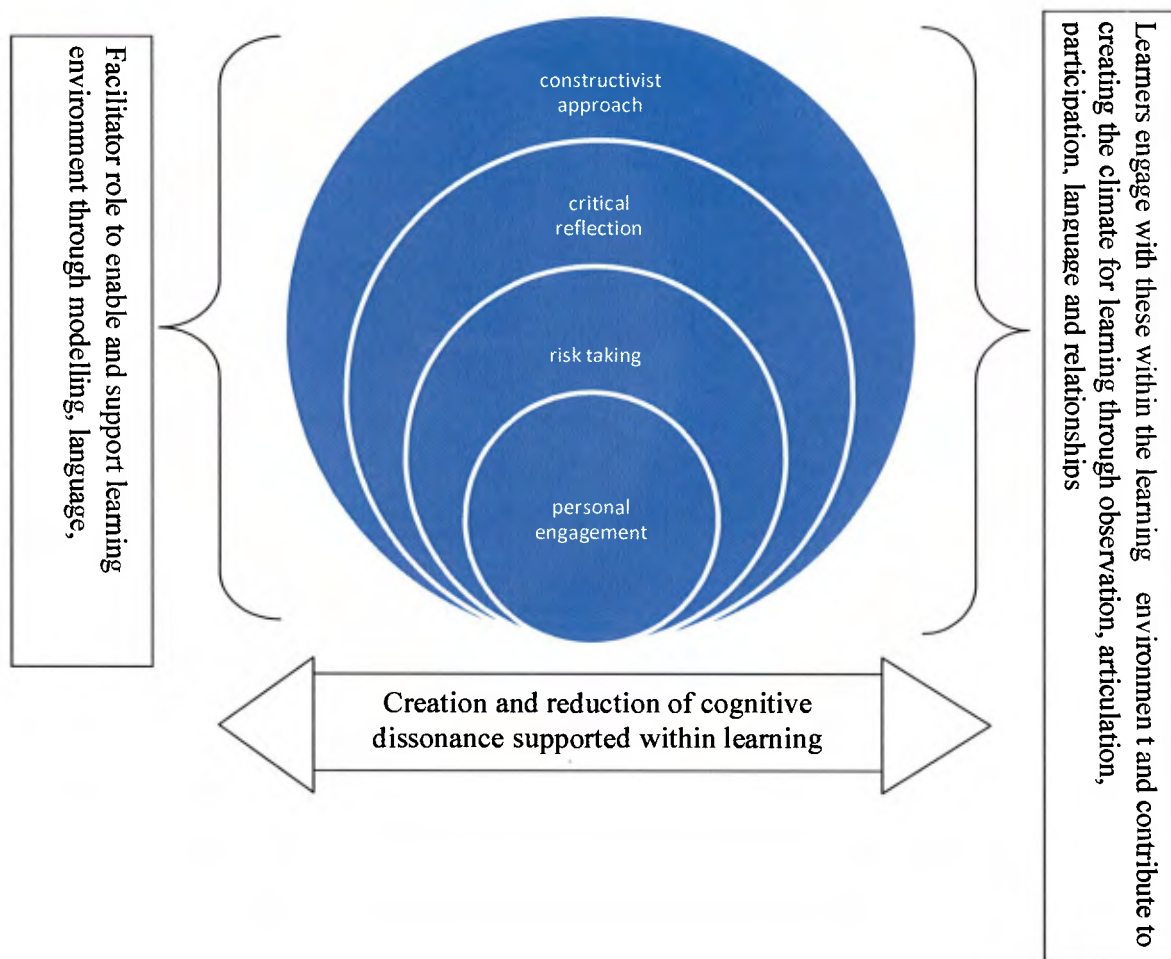


Figure 5.4: Factors within learning environment that support the use of cognitive dissonance and are affected by learners and facilitator

It appears that the relationship between the facilitator and learning environment is symbiotic since the facilitator requires the appropriate learning environment in which to operate, yet without their input which in turns enables the learners to contribute the learning environment is just a physical space. The climate is created by interaction between the people and space. Roskos and Bain posit five features of conducive learning environments; ‘a warrant for thinking and studying (permission), models of thoughtfulness, access to superior mediation, maintaining a focus on learning, and acknowledging barriers to thoughtfulness’ (1998, p89). I argue that the learning

environments encountered in this study have much in common with these features. Whilst the terminology may be different the conceptualisation seems similar. There appear to be parallels between Roskos and Bain's 'permission' and the 'risk taking' observed and discussed in this study. One might argue that the 'access to superior mediation' (p.101) could be seen as the facilitator role operating within a constructivist approach. It might also include enabling learners so that they can become independent problem-solvers and mediate their own experiences:

I know that I've been frustrated as well because when we're challenged, I've often like said, what I think an answer should be and then the digging has just made me think "hang on, is this why?" All the time it's all about why which has really impacted on me I think. I thought I knew it. Before we used to talk about going into a school as a consultant and saying "what is the impact on the school" but actually it's even deeper than that (Pam, interview).

Roskos and Bain found evidence of what they termed 'intellectual unrest' (1998, p.98) describing:

Although on shaky grounds at times, discussions that challenged and provoked thinking were achieved with some regularity, even though they tended to generate conflict and anxiety among the participants (p.101).

I suggest that the scenario described above is an example of cognitive dissonance, one which matches in many ways those observed over ten years later in my study. It implies that there are fundamental and recognisable features to a cognitively dissonant experience. The cognitive dissonance that is creating such conflict and anxiety requires more than Roskos and Bain's access to superior mediation. Instead I argue that it is the interplay between facilitator and learning environment that is crucial. It is the 'activity towards dissonance reduction' (Festinger, 1957, p.3) which enables learners to transform their perspectives and the actions and interplay between facilitator and learning environment either support and enable or hinder that process (Figures 5.3, 5.4). The final part of this chapter brings together that relationship and considers how it informs cognitive dissonance as an educative resource.

5.6 Cognitive dissonance as an educative resource in praxis

This chapter has sought to dive further into the data searching for the possibility of pearls that might influence praxis. Data identified features and characteristics of cognitive dissonance but how or whether it was an educative resource required deeper analysis. This resulted in a new hypothesis positing that whilst cognitive dissonance existed for adult learners within complex professional learning, operating as an educative resource appeared dependent upon the facilitator. This dependency was subject to facilitator skill, decision making and understanding. All of which were seemingly reliant upon a dynamic relationship between factors affecting each within the facilitator role (Chapter 4). Added to that is the complexity of the learning environment; created in part by the facilitator, pedagogy of programme and in part by the learners themselves, their interactions and expectations. This section aims to provide implications for praxis from this complexity.

Behind the screen facilitators seek to lift the level of their learners' understanding. They search for words, gestures, indications that they can exploit to create opportunities for learning. To do so they need to be acute observers both of their learners and of the teaching interactions occurring on the other side of the screen. By identifying something, no matter how small, they can create a pearl that transforms meaning.

It is the process by which adults learn how to think critically for themselves rather than take assumptions supporting a point of view for granted (Mezirow, 2009, p.103).

That pearl can be the introduction of conflict, tension, challenge, risk into the otherwise seemingly safe and sedate environment of watching an early literacy lesson through a one way screen. From this study I argue that moments or incidents of challenge are all around the learners as they observe the lesson. In themselves, they are not pearls, just irritants potentially interrupting the quiet contemplation of early reading and writing or to return to Pamela: 'the uncomfortable thing at the beginning is wishing you would

shut up so I can watch that lesson'. They could be construed as cognitive dissonance and the environment and facilitation could be dissonant too. However, within an appropriate learning environment and facilitated skilfully negative emotions such as irritation, frustration can become the grit that with cycles of critical reflection and examination of alternatives can shift learners to transformative learning. Reflecting on the findings from the study it appears that whilst cognitive dissonance is potentially surrounding learners through the actual experience, observation, learning environment, teaching strategy, approach by facilitator and learner to the situation, these of themselves are not sufficient to create the disorientating dilemma that marks stage one of Mezirow's perspective transformation (2009). They might provide a 'cumulative, progressive sequence of insights resulting in changes in points of view and leading to a transformation in habit of mind' (Mezirow, 2009, p.94). This has implications for praxis with most professional development currently limited to an entitlement of five days per academic year. Longer programmes which offer opportunities to engage in critical reflection appear dependent upon the personal commitment and financial ability of individuals, which potentially reduces support for professional development. It is only possible to infer from observations of behaviours, body language, expostulations that a learner is experiencing cognitive dissonance. Being able to make inferences is important in that they inform facilitators' actions and choices. This study has shown that facilitators are able to identify responses in their learners that signal intellectual discomfort and challenge to previously held concepts. These features include physical and emotional behaviours, are individually experienced and are noticeably different to other actions by the same learner. The implication is that facilitators need to be both acute observers but also become aware of their learners and their reactions. Recognising cognitive dissonance and its affect on learners is not sufficient for it to become an educative resource. A conscious decision must be made to either reengage or dismiss

the cognitive dissonance. There are good reasons why a naturally occurring challenge to learners' currently held beliefs or understandings might be dismissed by a facilitator and not adopted as a pearl. These include the current position of the facilitator on the continuum of skill and their ability to manage the cognitive dissonance in a positive way. It may be that the current position of the learners on the learning journey is such that the dissonance would overwhelm them and discourage continuation of their studies (Galman, 2009). Or it might be that the stated aims of that session would be undermined by a digression. This implies that facilitators need to hold a current and continuously updating picture of each individual learners' progress against the overall aim of the professional learning experience, including their own. In making the conscious decision to use naturally occurring cognitive dissonance as a grit to create a pearl of learning the facilitator needs to have a clear understanding of their aim in doing so and the possible trajectory this might take. The implication is that without an overall understanding the facilitator will not be able to manage the potential risks associated with cognitive dissonance and may inadvertently undermine their previous work with the learners. Part of that decision process will include weighing up what else might need to be omitted or given superficial coverage in that session to allow sufficient time to work through the complexities and ambiguities (Fullan, 2004). An alternative to naturally occurring cognitive dissonance is the deliberate introduction or creation of it by the facilitator, perhaps through playing 'devil's advocate'. This implies that the facilitator is confident in their ability to manage the risks associated with cognitive dissonance, and is confident in their own ability to facilitate such that the cognitive dissonance acts as an educative resource. This has implications for their personal awareness of their position on a continuum of facilitation skill and the factors that contribute, such as observation, critical reflection, personal commitment and experience. Finally, the facilitator must be confident that the learning environment created by them in collaboration with their

learners is such that it will support and enable this type of facilitation in a positive and empowering manner. Encounters with cognitive dissonance can be frequently categorised as negative through conflict between the expectations of learner and facilitator compounded by conflicting strategies for learning (Boulton-Lewis et al. 2003; Prosser et al. 2003; Cano, 2005; Postareff et al. 2008). Whereas in a learning environment that is supportive these conflicts can be mediated and the use of cognitive dissonance as an educative resource results in positive outcomes (Roskos and Bain, 1998; Ince, 2010). Being free from anxiety and fear of failure liberates learners to engage in the cognitive processes towards new learning, the aim for all facilitators.

Chapter 6:

Conclusions, limitations and recommendations

6.1 Introduction

This study set out to explore cognitive dissonance as an educative resource in complex professional learning. The research questions I addressed were:

- How might cognitive dissonance be more readily recognised or identified by facilitators within complex adult professional learning?;
- How do facilitators of such learning utilise cognitive dissonance within a constructivist approach to learning (Kroll, 2004) to encourage and facilitate transformative learning (Mezirow, 2009)?

The threefold rationale for the choice of study was set against a wider context whereby the use of cognitive dissonance appeared in use across academic and public domains but seemed to attract a multiplicity of interpretations. First, the perceived need for greater clarity in understanding cognitive dissonance to support less experienced colleagues in its use within a specific professional development programme. The need arose from the explicit use of cognitive dissonance and recognition that unless this was also accompanied by more transparent discussion and articulation of the features and characteristics of cognitive dissonance any educational worth might be undermined. Second, the study was a response to a call in literature for more research on the process rather than the outcome of transformative learning to improve practice, (Taylor, 1997; Snyder, 2008). Third, I have a personal interest in exploring the phenomenon of cognitive dissonance from previous research (Ince, 2010) and adding to the field of knowledge. These reasons informed the study focus and an exploratory case study approach was adopted. Cognitive dissonance is explicitly discussed within the professional development programme for experienced literacy professionals as part of their Masters award. As teacher-educators they are expected to use cognitive dissonance

in their work with teachers. The literacy intervention professional development context offered an example of complex professional learning which could be viewed at several levels and in different settings whilst maintaining a consistency of approach and values. This learning context was chosen for the consistency of environment: two lessons observed from behind a screen in darkness and real time with discussion led by a facilitator. This consistency of environment supported opportunities for any findings to move beyond any one facilitator or group and potentially offered a wider interpretation of how cognitive dissonance might be both recognised and identified as well as how it might be best used as an educative resource. This chapter reviews the outcomes from the research, discusses the implications for professional learning and proposes ways in which cognitive dissonance might be more effectively utilised as an educative resource. I identify limitations to the study and make recommendations. Finally, I suggest future areas for research.

6.2 Pearls of new learning

This study set out to clarify and characterize cognitive dissonance so that it might be more easily recognised and utilized by facilitators of professional learning. In addressing this problem I believe my interpretation of data from this study contributes to the field of knowledge in four ways which I outline below using key words: catalyst, context, creator, and purpose and I start with how cognitive dissonance might be more readily recognised and utilized as a catalyst.

Taylor (1997) and Snyder (2008) called for research into the transformative process itself. Their research and analysis of other studies in transformative learning highlighted the need for learners to experience a disorientating dilemma to act as a catalyst.

From my interpretation of data it seems that whilst cognitive dissonance remains an elusive phenomenon, there are indicators that can support facilitators in more readily

recognising or identifying it within a professional learning environment. These indicators suggest that cognitive dissonance is: **time sensitive, individually, physically and or emotionally experienced** and build upon previous work (Ince, 2010). So whilst cognitive dissonance remains complex and difficult to identify data from this study suggests that skilled facilitators can interpret their learners' behaviours and responses and use this to support facilitation of transformative learning.

Cognitive dissonance is **time sensitive** in that according to where an individual is in their personal learning journey the mismatch between their understandings might not be relevant or noticeable. For example:

it does take time and that information what we've learnt for me is still settling as well. It's like when we come here someone has shaken a rug and things sort of come out of it and wait for things to settle down and it hasn't quite settled down before we are back again giving it another shake (Sharon, interview).

Cognitive dissonance is experienced as **physical and or emotional** responses to new information which challenges previously held constructs. Recognising responses as manifestations of a cognitively dissonant experience appears dependent upon knowing the learners and seeing the behaviour as different to their normal learning mode. The behaviours may include changes in body language, such as nodding or shaking their head, leaning forward, sudden movement, changes to tone of voice, wanting to speak or may be more emotional such as laughter, or distress, (Chapter 4).

Cognitive dissonance can be experienced at **different levels**, from basic procedural right and wrong ways of doing something to higher order understandings (Table 4.1, Chapter 4). Cognitive dissonance is an **individually experienced** phenomenon, with each learner individually experiencing cognitive dissonance according to their previously held constructs and experiences. It can be triggered through seeing, hearing or experiencing something that conflicts with existing understandings and can create a

confrontation between espoused theory and theory in use (Argyris and Schön, 1974). It creates a disorientating dilemma for learners, this is important, according to Snyder (2008), because it acts as a catalyst creating the need for change, in the context of educational professional development, towards transformative learning. So whilst data from this study suggested some features and ways of recognising or characterising cognitive dissonance it remains elusive. Cognitive dissonance appears reliant upon inference, acute observation and opportunities to engage the learners in discussion to probe their understandings and feelings to support them in exploring the inconsistency in cognition (Festinger, 1957) and their ‘activity orientated towards dissonance reduction’ (*ibid*, p.3).

Second, this study makes a contribution to discussion about context. The learning environment is discussed in literature and context plays an important role in considering application and interest in research outcomes. This study identified a specific context known as ‘behind the screen’. This location was chosen because it has a consistency of environment (RRNN, 2006) which allowed parity of the data collection context across several centres. The ‘behind the screen’ context also reflects the complexity of professional learning environments. Snyder’s synthesis of transformative literature identifies that: ‘it is difficult to create a context in which transformation might take place’ (2008, p.172). This study did not create such an environment but it did find that the centres studied had shared features which appeared to support transformative learning. One such feature identified, was that of managed risk. Where the learning environment was set up to support risk taking cognitive dissonance was more likely to be a catalyst. However, there were risks associated with the facilitators’ abilities as an observer and enabler in creating risk areas. If these were not recognised and managed there was potential for learners to be overcome by cognitive dissonance and to walk away from the process (Galman, 2009). This study contributes to the field of knowledge

through its explicit identification of managed risk as part of the context and through discussion of how facilitators and learners engage with risk within professional development.

Third, key in the management of risk within the learning environment and in recognising and using cognitive dissonance is the facilitator or creator. They had a key role in creating the learning environment, modelling the behaviours and expectations for professional learning. Pamela reflected on what the facilitator needed to do during the year long professional development programme:

because you are modelling, guiding them through and when you are still going to challenge them but then you should end up being quiet because they end up challenging each other towards the end (Pamela, interview).

To support learning the facilitator has to know what the end goal of the programme is, where the learners are at any point within the programme and have strategies for supporting the learners' progress towards that end goal. One such strategy might be the creation of cognitive dissonance as a catalyst for change. Or it might be the harnessing of cognitive dissonance as an educative resource as recognised through acute observation within the session. Ultimately in the PD observed in this study, the goal was for participants to become generative learners, able to make independent decisions to problem solve: 'a main goal for transformative learning and the development of more autonomous thinkers able to justify their choices or reasons' (Schurgurensky, 2002, p.64). In achieving this goal the facilitators' role is about helping learners to recognise where they are, supporting and enabling learners to move forward for which Berger uses the term "growing edge" (2003, p.336). This might be interpreted as a version of Vygotsky's zone of proximal development (Lyons, 2001), or Wood's scaffolding (1998). I choose to see this as movement through Mezirow's ten stages (1981). The learners are confronted by a disorientating dilemma, often created by a behind the screen experience. Discomfort ensues (Mezirow's stage 2 feelings of guilt, shame,

anger) which Festinger suggests is the ‘antecedent condition leading to activity orientated toward dissonance reduction’ (1957, p.3), since humans dislike being out of their comfort zone. In considering how to reduce the dissonance, (stage 3) a critical assessment of assumptions is made, which in the context of this study seemed to be supported by the facilitator who shapes the learning environment and context so that feelings can be shared (stage 4), exploration of options and planning actions (stages 5 & 6) can be promoted. The constructivist approach to the curriculum and pedagogy of this professional learning programme is supportive of the facilitator as a creator of disorientating dilemmas (cognitive dissonance) and of their management through collective and collaborative discussion for problem solving. But new to the discussion is the role of observation by the facilitator. Without becoming an acute observer the facilitator, despite experience in role, is less likely to recognise and harness cognitive dissonance. Lack of recognition also hampers the management of risk within the learning environment and potentially undermines powerful opportunities for transformative learning as a result of a cognitively dissonant experience for learners. The creator role is double edged, creating positive learning opportunities and creating potentially damaging risk through not being aware or observant of cognitive dissonance and its influence on learners.

Fourth, Snyder states that: ‘Adult learners need to have a reason for learning. Without that reason, there is no commitment to the transformative process’ (2008, p.179). This study identified that personal commitment and engagement with critical reflection was important and affected facilitators’ effectiveness in role. The professional development programme for this research is an early literacy intervention and learners wanted to improve their practice to impact upon the literacy learning of young children. This gave them a very clear purpose for engaging with the PD and echoed Fullan’s call for moral purpose underpinning the actions for professionals as agents of change (2004). Purpose

beyond measurable outcomes was a determining factor in how well individuals performed as facilitators. Those most committed invested most in their critical reflection of practice and engaged in personal development to improve. Engaging with the research process itself supported their personal motivation (Ince, 2012).

So whilst ‘more work can be done in the field of transformative learning to decipher how curriculum can be designed to prompt learners to lean into what might be an unsettling learning experience’ (Snyder, 2008 p.178) this study contributes to knowledge and understanding through work on cognitive dissonance as a catalyst, the risk area within the context, the facilitator’s role as a creator and the purpose underpinning engagement in professional development. These four concepts emerged from the exploration of cognitive dissonance as an educative resource and in pursuing the research aim of providing clarification about the features and characteristics of cognitive dissonance to support its use within professional development programmes.

6.4 Limitations

The main limitation of this study was time, that of the researcher and the external timeline of the programme against the employment of the researcher and Ed.D submission pattern. Researcher time was constrained by work commitments and patterns of programme attendance by participants. Participants and planned data collection were affected by a change in government and funding. This impacted upon the employment security of participants and led to some withdrawing from the study, citing pressures of finding new positions and insecurity in role. As a result the sample was smaller than originally planned, and early data already collected could not be included in the analysis. The research pattern of data collection and analysis in this case study meant that analysis of data whilst ongoing and using a constant comparison approach was set not by data saturation but by the data saturation point reached within the time frame of eight months (January 2011-August 2011). This study was limited by

my inexperience as a researcher in using a grounded theory approach. The size of the participant group and number of specific learning context limits the opportunity to generalise from the findings of this study. Although the range of data sources, including field notes, and data collection over a professional development year long programme responds to criticisms of previous studies (Snyder, 2008).

6.5 Recommendations and dissemination

Sharing findings with colleagues through conferences and papers has highlighted areas for dissemination and further research. I am interested in exploring the notion of risk within professional learning, its perception and resolution. There seems to be an opportunity for developing my work on cognitive dissonance in different contexts, for example with less experienced professionals and in Initial Teacher Education. This has implications for my professional role whereby I aim to apply my research to shape practice and influence others through publications.

6.6 Conclusion

At the beginning of this study I set out to explore cognitive dissonance as an educative resource in response to a lack of clarity and consistency in how cognitive dissonance as an explicit part of PD was understood and articulated. At the end of this study I can propose features and characteristics of cognitive dissonance that would support colleagues in discussion and application of cognitive dissonance. Key factors in the facilitation process have emerged from data analysis and interpretation. These are the importance of acquiring acuity of observation in recognising cognitive dissonance in learners, identification and recognition of location for cognitive dissonance leading to management of potential risk for learners and personal commitment to the process. This study contributes towards understanding the process of transformative learning through the use of cognitive dissonance as a catalyst which if consciously recognised and facilitated well can be harnessed as an educative resource.

References

- (1991). *Collins Dictionary and Thesaurus*. (Ed) Makins, A. D. M., Harper Collins.
- Argyris, C., Schön, D.A. (1974). *Theory in Practice Increasing Professional Effectiveness*. San Francisco: Jossey-Bass.
- Atkinson, P. and Hammersley, M. (1994). *Handbook of Qualitative Research*. Thousand Oaks, California: Sage.
- Bangs, J., MacBeath, J., Galton, (2011). *Reinventing Schools, Reforming Teaching from political visions to classroom reality*. Oxon: Routledge.
- Baviskar, Sandhya, N., Hartle, R., Todd, and Whitney, T. (2009). "Essential Criteria to Characterize Constructivist Teaching: Derived from a review of the literature and applied to five constructivist-teaching method articles." *International Journal of Science Education* 31(4): 541-550.
- Biggs, J. (1999). *Teaching for Quality Learning at University*. Buckingham: SRHE & Open University Press.
- Boud, D., Keogh, R., Walker, D. (Ed.) (1985). *Reflection: Turning Experience Into Learning*. London/New York: Kogan Page Ltd./ Nichols Publishing Company.
- Boud, D. (2001). 'Using Journal Writing to Enhance Reflective Practice'. *New Directions for Adult and Continuing Education*, 90 (Summer 2001), 9-18.
- Boulton-Lewis, G. M., Wilss, L., Lewis, D. (2003). "Dissonance between Conceptions of Learning and Ways of Learning for Indigenous Australian University Students." *Studies in Higher Education* 28(1): 79-89.
- Brehm, J., Cohen, A. (1962). *Explorations in Cognitive Dissonance*. New York: John Wiley & Sons, Inc.
- Brindley, R., Quinn, S. M. F., Morton, M. L., (2009). 'Consonance and dissonance in a study abroad program as a catalyst for professional development of pre-service teachers'. *Teaching and Teacher Education*, 25 (3), 525-532.
- British Educational Research Association (2004) *Revised Ethical Guidelines for Educational Research* available at: www.bera.ac.uk/publications/guidelines.
- Brookfield, S. (1986). *Understanding and Facilitating Adult Learning*. San Francisco: Jossey-Bass.
- Brookfield, S. (1987). *Developing Critical Thinkers challenging Adults to Explore Alternate Ways of Thinking and Acting*. Buckingham: Open University Press
- Brown, G. (2009). "The Ontological Turn in Education The Place of the Learning Environment." *Journal of Critical Realism* 8(1): 5-34.
- Burke, J.L. (2009). *Rain Gods*. London: Phoenix
- Cano, F. (2005). "Consonance and Dissonance in Students' Learning Experience." *Learning and Instruction* 15(3): 201-223.
- Charmaz, K. (2006). *Constructing Grounded Theory a practical guide through qualitative analysis*. London: Sage.
- Clay, M. (1991). *Becoming Literate the construction of inner control*. Portsmouth, N.H: Heinemann.
- Clay, M. (2001). *Change Over Time in Children's Literacy Development*. Portsmouth NH: Heinemann.
- Clay, M. (2002). *An Observation Survey of Early Literacy Achievement*. Portsmouth N.H: Heinemann.
- Clay, M. (2005a). *Literacy Lessons Designed for Individuals part one Why? When? and How?* Portsmouth: N.H. Heinemann
- Clay, M. (2005b). *Literacy Lessons Designed for Individuals part two teaching procedures*. Portsmouth NH: Heinemann.
- Cohen, L., Manion, L., Morrison, K.. (2007). *Research Methods in Education*. New York: Routledge.
- Cooper, J. (2007) *Cognitive Dissonance Fifty Years of a Classic Theory*, London: Sage.
- Corbin, J., Strauss, A., (2008). *Basics of Qualitative Research 3e*. London: Sage.

- Cranton, P. (1996). *Professional Development as Transformative Learning new perspectives for teachers of adults*. San Francisco: Jossey-Bass.
- Cranton, P. (2006). *Understanding and Promoting Transformative Learning a guide for educators of adults*. (2nd ed.). San Francisco: Jossey-Bass.
- Crotty, M. (1998). *The Foundations of Social Research*. London: Sage.
- Cunningham, B. (Ed.) (2008). *Exploring Professionalism*. Bedford Way Papers. London: Institute Of Education, University of London.
- Darling-Hammond, L. and MacLaughlin, M. W. (1995). "Policies that support professional development in an era of reform." *Phi Delta Kappan* 92(6): 81-93.
- Day, C. (1993). 'Reflection: a necessary but not sufficient condition for professional development'. *British Educational Research Journal*, 19 (1), 83-93.
- Department of Education and Science (2000). *Learning for Life: White Paper on Adult Education*. Dublin: Stationery Office.
http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1a/c6/5e.pdf
- Dewey, J. (1910). *How We Think*. Boston: Heath.
- Dirkx, J. (2009). "Editorial: The Influence of Context on Our Ways of Thinking About Transformative Learning." *Journal of Transformative Education* 7(3): 187-188.
- ECRR (2011). *Every Child a Reader Annual Report 2009-10*. London, Institute of Education: 16.
- Edwards, A., Talbot, R., (1999). *The Hard-pressed Researcher*. Harlow: Pearson Education Limited.
- Eraut, M. (1992). *Developing the professions: Training, Quality & Accountability*. University of Sussex, University of Sussex: 21.
- Eraut, M. (1994). *Developing Professional Knowledge and Competence*. London: The Falmer Press (Routledge Falmer).
- Etzioni, A. (Ed.) (1969). *The Semi-Professions and their organisation teachers, nurses, social workers* London: Collier-Macmillan Ltd.
- Fenwick, T. J. (2000). "Expanding Conceptions of Experiential Learning: A Review of The Five Contemporary Perspectives on Cognition." *Adult Education Quarterly* 50(4): 243-272.
- Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Stanford: Stanford University Press.
- Festinger, L. (Ed.) (1964). *Conflict, Decision, and Dissonance*. Stanford Studies in Psychology III. Stanford: Stanford University Press.
- Flick, U. (2006). *An Introduction to Qualitative Research*. London: Sage.
- Freidson, E. (2001). *Professionalism the third logic*. Cambridge: Polity Press.
- Fullan, M. and Ballew, A. (2004). *Leading in a Culture of Change personal action guide and workbook*. San Francisco: Jossey-Bass.
- Fullan, M. (2006). *Change Theory a force for school improvement*. Seminar series paper no. 157, November 2006, Centre for Strategic Education
- Galman, S. (2009). 'Doth the lady protest too much? Pre-service teachers and the experience of dissonance as a catalyst for development.' *Teaching and Teacher Education* 25(3): 468-481.
- Gaffney, J. S. and R. C. Anderson (1991). *Two-Tiered Scaffolding: Congruent Processes of Teaching and Learning*. Illinois, Centre for the Study of Reading, University of Illinois at Urbana-Champaign: 22.
- Gaffney, J. S., Askew, B.J. (Eds.) (1999). *Stirring the Waters The Influence of Marie Clay*. Portsmouth N.H: Heinemann.
- Gilham. (2000), *Case Study Research Methods*. London: Continuum.
- Glaser, B. and Strauss A. (1999). *The Discovery of Grounded Theory*. New Brunswick: Aldine Transaction.
- Hatton, N. and Smith, D. (1995). 'Reflection in Teacher Education: Towards Definition and Implementation'. *Teaching and Teacher Education*, 11 (1), 33-49.

- Hargreaves, A. G. (1996). Teachers' Professional lives: aspirations and actualities. *Teachers' professional lives*. I. Goodson, Hargreaves, A. (Eds.) London, Falmer press: 1-27.
- Hodge, N. And Chandler, S. (2010). "It's not what you do; it's the way that you question: that's what gets results" *Support for Learning*, 25 (1), 11-14.
- Holton, J. (2007). "The Coding Process and its Challenges". *The Sage Handbook of Grounded Theory*. Bryant, A. and Charmaz, K. (Eds). London, Sage: 265-290.
- Ince, A. (2009). *Can portfolios be used as a source of evidence for dissonance within Reading Recovery Teacher Leader Training ?* Unpublished assignment submitted for University of London, Institute of Education Doctor of Education Programme
- Ince, A. (2010). *An exploration of cognitive dissonance in adult professional learning*, Unpublished Institute Focused Study. University of London, Institute of Education Doctor of Education Programme
- Ince, A (2012). *'The Power of Participatory Process: effective coaching through research engagement '*. Paper presented at British Educational Research Association Conference. University of Manchester. 4-6th September 2012
- Jordi, R. (2011). "Reframing the Concept of Reflection: Consciousness, Experiential Learning and Reflective Learning Practices." *Adult Education Quarterly* 61(2): 181-197.
- Kegan, R. (1994). *In Over Our Heads: The Mental Demands of Modern Life* Cambridge, Mass: Harvard University Press
- Kelly, G.A. (1963). *A Theory of Personality*. New York: Norton.
- King, K. P. (2005). *Bringing Transformative Learning To Life*. Malabar: Krieger Publishing Company.
- Kintsch (2009). Learning and Constructivism. In S. Tobias and R. Land *Constructivist Instruction Success of Failure?* Abingdon: Routledge: 223-241.
- Kitchenham. A. (2008). "The Evolution of John Mezirow's Transformative Learning Theory." *Journal of Transformative Education* 6(2): 104-123.
- Kroll, L.R. (2004). 'Constructing constructivism: how student-teachers construct ideas of development, knowledge, learning and teaching'. *Teachers and Teaching* 10 (2), 199-213.
- Lange, J. and Burroughs-Lange, S. (1994). 'Professional Uncertainty and Professional Growth: A Case Study of Experienced Teachers'. *Teaching and Teacher Education*, 10 (6), 617-631.
- Levinson, D. J. (1978). *The Seasons of a Man's Life*. New York: Knopf.
- Lindblom-Ylanne, S. (2003). "Broadening an understanding of the phenomenon of dissonance." *Studies in Higher Education* 28(1): 63-77.
- Long, W. F. (2003). "Dissonance detected by cluster analysis of responses to the Approaches and Study Skills Inventory for Students." *Studies in Higher Education* 28(1): 21-35.
- Lyons, C. (2003). *Teaching Struggling Readers how to use brain based research to maximise learning*. Portsmouth NH: Heinemann
- Lyons, C. A., Pinnell, G.S, DeFord, D.E. (1993). *Partners in Learning Teachers and Children in Reading Recovery*. New York: Teachers College Press.
- Lyons. C.A. and Pinnell, S. G. (2001). *Systems for Change in Literacy Education a guide to professional development*. Portsmouth N.H: Heinemann.
- MacKay, P. (Monday 29th November, 2010). *The Daily Mail* p.17
- Mälkki. K. (2010). "Building on Mezirow's Theory of Transformative Learning: Theorizing the Challenges to Reflection." *Journal of Transformative Education* 8(1): 42-62.
- McCall. G.J., Simmonds. J. L. (Eds.) (1969). *Issues in participant Observation A Text and Reader*. Behavioural Science: Quantitative Methods. London: Addison-Wesley.
- Meyer, J. H. F., Shanahan, M. P. and Laugksch, R. C. (2007). 'Students conceptions of research. 2: An exploration of contrasting patterns of variation'. *Scandinavian Journal of Educational Research*, 51 (4), 415-433.
- Meyer, J. H. F. and Shanahan, M. P. (2003). 'Dissonant Forms of "Memorizing" and "Repetition"'. *Studies in Higher Education*, 28 (1), 5-20.

- Mezirow, J. (1981). 'A Critical Theory Of Adult Learning and Education'. *Adult Education*, 32 (1), 3-24.
- Mezirow, J. (1991). *Transformative Dimensions of Adult learning*. San Fransico: Jossey-Bass.
- Mezirow, J. and Associates (2000). *Learning as Transformation Critical Perspectives on a Theory in Progress*. San Francisco: Jossey-Bass.
- Mezirow, J. (2009). An Overview of Transformative Learning. In K. Illeris. *Contemporary Theories of Learning learning theorists in their own words*. Abingdon: Routledge: 90-105.
- Mezirow, J., Taylor, E., and Associates. (2009). *Transformative Learning in Practice Insights from Community, Workplace, and Higher Education*. San Francisco: Jossey-Bass.
- Miles, M. B., Huberman A.M. (1994). *An Expanded Sourcebook Qualitative Data Analysis* London: Sage.
- Moon, J. (2004). *A Handbook of Reflective and Experiential Learning Theory and Practice*. London and New York: Routledge Falmer.
- Morse.J. (2007). Sampling in Grounded Theory. *The Sage Handbook of Grounded Theory*. London: Sage.
- Newman, D., Griffin, P., Cole, M. (Eds.) (1989). *The Construction Zone: working for cognitive change in school*. Learning in doing: social, cognitive, and computational perspectives. Cambridge: Cambridge University press.
- Osterman, K. F., Kottkamp, R.B. (1993). *Reflective Practice for Educators Improving Schooling Through Professional Development*. Newbury Park, California: Corwin Press Inc. A Sage Publication Company.
- Perkins, D. (2006). Constructivism and troublesome knowledge. In J. H. F. Meyer and R. Land (Eds.) *Overcoming Barriers to Student Understanding: Threshold Concepts and Troublesome Knowledge*. Abingdon: Routledge Falmer: 33 -47.
- Peters, J. M., Armstrong, J.L. (1998). "Collaborative Learning: People Laboring Together to Construct Knowledge." *New Directions for Adult and Continuing Education* 79(Fall 1998): 75-86
- Piaget (1967). *Six Psychological Studies*. London: London University Press
- Pickering, J. (2007). Teachers' Professional Development: Not whether or what but how. *New Designs in Teachers' professional learning*. Institute of Education, London: University of London:
- Postareff, L., Katajavuori, N., Lindblom-Yliänne, S., Trigwell, K. (2008). "Consonance and dissonance in descriptions of teaching of university teachers." *Studies in Higher Education* 33(1): 49-61.
- Poutiatine, M. (2009). "What is transformation?: Nine Principles Toward an Understanding of the Transformational Process for Transformational Leadership." *Journal of Transformative Education* 7(3): 189-208.
- Prosser, M. (2003). 'Dissonance in experience of teaching and its relation to the quality of student learning'. *Studies in Higher Education*, 28 (1), 37-48.
- Prosser, M., Ramsden, P., Trigwell, K. and Martin, E. (2003). 'Dissonance in Experience of Teaching and Its Relation to the Quality of Student Learning'. *Studies in Higher Education*, 28 (1), 37-48.
- Ragin, C. Becker, C., Howard. S. (Eds). (1992). *What is a Case? Exploring the Foundations of Social Enquiry*. New York: Cambridge University Press.
- Robson, C. (2011). *Real World Research*. Oxford: John Wiley and Sons Ltd.
- Rodgers, E. (2000). Language Matters: When is a scaffold really a scaffold? *National Reading Conference Yearbook*, 49:78-90
- Roskos, K. and Bain, R. (1998). "Professional Development as intellectual activity: Features of the learning environment and evidence of teacher's intellectual engagement." *The Teacher Educator* 34(2): 89-115.
- Roth, W.M. (2005). *Doing Qualitative Research Praxis of Method*. Rotterdam: Sense Publishers.
- RRNN (2006). *Standards and Guidelines for the Implementation of Reading Recovery*. London: Institute of Education.
- Rudestam, K. E., Newton, Rae R. (2007). *Surviving your dissertation A Comprehensive Guide to Content and Process*. Thousand Oaks, California: Sage.

- Saltiel, D., Bradbury, H., Frost, N., Kilminster, S. and Zukus, M. (2010). "Judgement, Narrative and Discourse: a critique of reflective". London: Routledge.
- Savery, J.R. and Duffy, T.T. (1994). 'Problem based learning: An instructional model and its constructivist framework'. *Educational Technology*, 35, 31-38.
- Schmitt, M., Askew, B., Fountas, I., Lyons, C., Pinnell, G.S. (2005). *Changing Futures*. Worthington, OH: RRCNA.
- Schön, D. A. (1983). *The Reflective Practitioner How Professionals Think In Action*. London: Temple Smith.
- Schön, D. A. (1987). *Educating the Reflective Practitioner towards a new design for teaching and learning in the professions*. San Francisco: Jossey-Bass.
- Schugurensky (2002). Transformative Learning and Transformative Politics: the Pedagogical Dimension of Participatory Democracy and Social Action. *Expanding the Boundaries of Transformative Learning essays on theory and praxis*. O'Sullivan, E.V., Morrell, A., and O'Connor, M.A., Basingstoke: Palgrave: 59-76.
- Shanahan, M. P. and Meyer, J. H. F. (2003). 'Dissonant forms of memorising and repetition'. *Studies in Higher Education*, 28 (1), 5-20.
- Snyder. C. (2008). "Grabbing Hold of a Moving Target; identifying and Measuring the Transformative Learning Process." *Journal of Transformative Education* 6(3): 159-181.
- Stake. R. (2005). Qualitative Case Studies. *The Sage Handbook of Qualitative Research*. Denzin. N.K. Thousand Oaks: Sage: 443-466.
- Stanovich, K. E. (1986). "Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy." *Reading Research Quarterly* Fall: 360-406.
- Swartz, S. L., Klein, A.F. (Eds.) (1997). *Research in Reading Recovery*. Portsmouth N.H: Heinemann.
- Taylor, E. (1994). Building Upon the Theoretical Debate: a critical review of the Empirical Studies of Mezirow's Transformative Learning Theory. *Adult Education Quarterly* 44:154-174
- Taylor, E. (1997). "Building Upon the Theoretical Debate: A critical Review of the Empirical Studies of Mezirow's Transformative Learning Theories." *Adult Education Quarterly* 48(1): 34-59.
- Taylor, E. (2000). Analyzing Research on Transformative Learning Theory. *Learning as Transformation critical perspectives on a theory in progress*. J. Mezirow. San Francisco: Jossey-Bass: 285-328.
- Taylor, E. (2007). An Update of Transformative Learning Theory: A Critical Review of the Empirical Research (1999-2005). *International Journal of Lifelong Education*, 26(2): 173-191
- Taylor, E. (2008). Transformative Learning Theory. In S.B. Merriam (Ed), *An Update of adult learning. New Directions for Adult and Continuing Education*, 119:5-15, San Francisco: Jossey-Bass
- Taylor, E. (2009). Fostering Transformative Learning insights from community, workplace, and Higher Education. In Mezirow, J., Taylor, E. And Associates *Transformative Learning in Practice*. San Francisco: Jossey-Bass.
- Taylor, S. (2003). "From Teacher to Tutor": *A Critical Case Study in Re-structuring Professional Identity and Learning*. Unpublished Institute Focused Study for University of London, Institute of Education Doctor of Education Programme.
- Taylor, S. and Bodman, S. (2012). "I've never been asked that before!" Preparing Teachers for any Eventuality? In Tan, O.S., (Ed) *Teacher Education Frontiers: International Perspectives on Building New Teacher Competencies in the 21st century*: Cengage, pp.x-xx
- Taylor, S. and Ince, A. (2012a). *Towards critical reflection to develop generative learners: the use of cognitive dissonance in effective professional learning*. Paper presented at ICE 8th International Conference on Education. Research and Training Institute of East Aegean, National and Kapodistrian University of Athens. 5th-8th July 2012.
- Taylor, S. and Ince, A. (2012b). *From Teacher-Practitioner to Teacher-Educator*. Paper presented at British Educational Research Association Conference. University of Manchester. 4-6th September 2012.

- Vermunt, J. and Minnaert, A. (2003). "Dissonance in student learning patterns: when to revise theory?" *Studies in Higher Education* 28(1): 49-61.
- Vermunt, J. and Verloop, N. (1999). Congruence and friction between learning and teaching, *Learning and Instruction*, 9, 257-280
- Warin, J. (2003). *Constructing Consistent Selves: longitudinal case studies from 3-13*. Paper presented at British Educational Research Association Conference, Herriot Watt University. September 2003.
- Warin, J., Maddock, M., Pell, A., Hargreaves, L. (2006). "Resolving identity dissonance through reflective and reflexive practice in teaching." *Reflective Practice* 7(2): 233-245.
- Washburn, A.M. (2008). "Editor's Perspective: Theories-in-Use." *Journal of Transformative Education* 6(2): 99-103.
- Wenger, E. (1998). *Communities of Practice: learning, meaning and identity*. Cambridge: Cambridge University press.
- Wicklund, R. A., Brehm, Jack, W. (1976). *Perspectives on Cognitive Dissonance*. New Jersey: Lawrence Erlbaum Associates Inc.
- Williams, B. (2001). 'Developing critical reflection for professional practice through problem-solving'. *Issues and Innovations in Nursing Education*, 34 (1), 27-34.
- Wisker, G. (2003). "Recognising and overcoming dissonance in postgraduate student research." *Studies in Higher Education* 28(1): 91-105.
- Wood, D. (1998). *How Children Think and Learn*. Oxford: Blackwell.
- Yin, R. (2009). *Case study research design and methods*. Thousand Oaks: California, Sage.

**LLLD: Using a theme in ISS to construct dissonance
for professional learning**

- What do we mean by 'dissonance'?
- Why do we need constructive dissonance?
- Ensuring that more refined/complex learning is constructed = TL's role.
- What does it look/sound like when behind the screen? What is the TL doing?

Planning the ISS

- Choose one quote and plan how you would use it as a trigger for talking/looking.
- Consider also how the teachers' needs can be incorporated in the frame for looking/critique.

Acceleration e.g. theme

- "To say that a slow-progress child who cannot be pushed or placed under stress should now learn at an accelerated rate seems to be a puzzling contradiction." (LLDfl, Prt 1, p22)
- "The teacher's task.... is to get the slow child responsive to instruction, happy to try and discover for himself, steadily accumulating the early reading behaviours and not losing his buoyancy and bounce." (BL p65)
- "Acceleration depends upon how well the teacher selects the clearest, easiest, most memorable examples with which to establish a new response, skill, principle or procedure." (LLDfl, Prt 1, p 23)
- "The teacher lifts the motivation and challenge and designs rich opportunities for students to explore increasingly complex texts, but the reader or writer begins to shape his own progress. (OS p 26)
- "The child must never engage in unnecessary activities because that wastes learning time." (LLDfl, Prt 1, p 23)

Teacher Leaders as Teachers of Experienced Professionals

What Teacher Leaders do works!

If the ultimate test of the effectiveness of a teacher professional development programme is the raised achievement of their pupils, then demonstrably Reading Recovery teacher training is highly successful. So we might be forgiven for claiming that Teacher Leaders concomitantly must know how to provide teachers with those effective professional development opportunities. But to date, we have very few descriptions of what those effective professional developers do (Lyons, Pinnell & DeFord, 1993 is the only one of note), and not one published account of **why** it works.

But why does it work?

Clay (1998) claims that Reading Recovery is "the very opposite of a prescriptive programme". Whilst lesson components in Reading Recovery provide a common structure for teaching and learning, what occurs within each part of the lesson is individually designed, implemented and monitored by the teacher to meet each child's diverse learning needs. So how do Teacher Leaders equip teachers to provide each "superbly sequenced programme determined by the child's performance"? (Clay, 1993, p9)

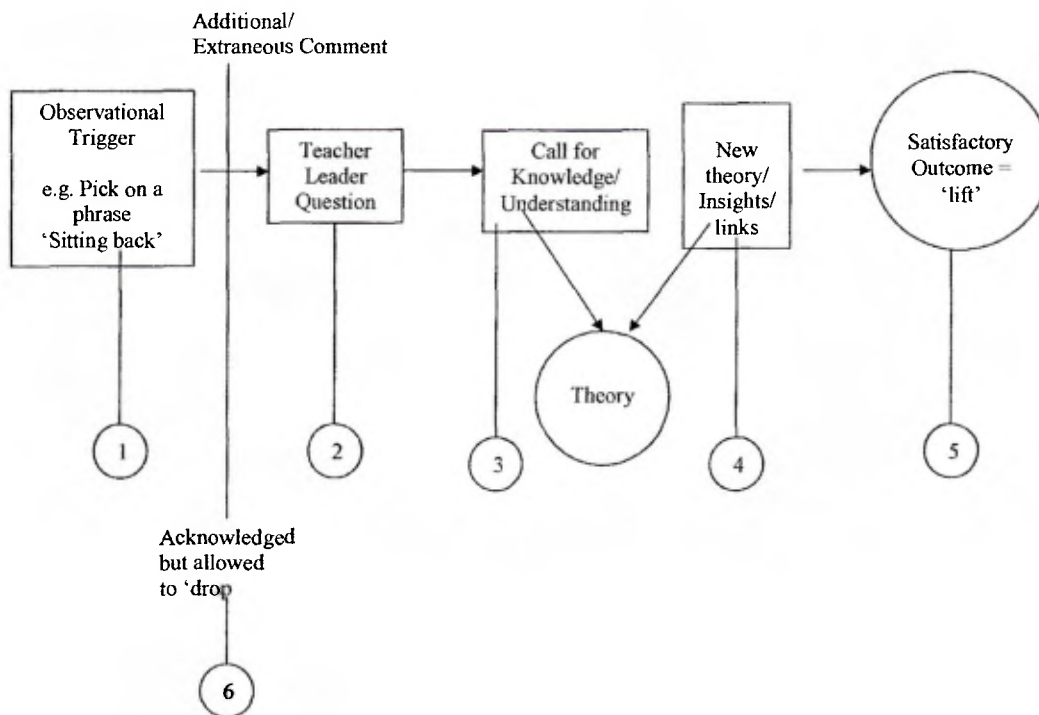
Roscos and Bain writing about professional development as intellectual activity, refer us to Schön's ideas, namely that "knowing how does not mean knowing why, which is critical to the flexible and adaptive use of procedural knowledge in ill-structured situations", (1998, p90). In terms of the uniqueness of the challenges each child presents to the teacher, Reading Recovery teacher development has to empower them to act decisively in such "ill-structured situations". To prepare them for these tensions between flexibility and clarity of purpose, repeated opportunities are provided for teachers to observe and critique lessons. Teacher Leader leadership has to harness these learning opportunities to develop teachers knowing not just the 'what' and 'how' of what they do, but also, and most importantly, the 'why'.

It is reasonable, therefore to expect that Teacher Leaders also know about more than the what and how of their work with teachers but also 'why'. To help in developing our capacity to describe, theorise, reflect upon and justify what Teacher Leaders do as 'teachers of experienced professionals', a theoretical model of the tutoring process during lesson observations would seem to be a good place to start.

What does it look like when it is working?

What follows is a description of how lesson observations during inservice sessions provide the context for Teacher Leaders to 'lift' the understanding of teachers in ways that impact not only on their practice but also on their teaching and learning philosophy. The descriptive model is developed from repeated observations of experienced and effective Teacher Leaders and Trainers. If it is a valid model it should feel familiar, although perhaps not always consciously driving what you do.

Managing a 'Tutoring Event': The Teacher Leader Teaching / Teacher Learning Cycle during Lesson Observations



The numbered sections described below relate to the numbers on the diagram. They generally occur sequentially except item 6, which may come at any time.

1. Triggers/Starters

This is the initiating comment relating to something observed. These triggers may come from a member of the teacher group which the Teacher Leader picks up or from the Teacher Leader him/herself.

Examples of triggers/starters include;

- Teacher Leader (or tutee) picks on a phrase e.g. "She's sitting back";
- An evaluative comment e.g. "Oh! it was going so well!";
- Integrative comment e.g. linking an observation to a procedural point;
- Observational e.g. giving a fine grained observational description;
- Affirming e.g. implying the group needs to keep going/go further;
- Re-stating a comment possibly adding rhetorical questions;
- Gaps/pauses can present as a significant opening depending upon what went before;
- Directing observation e.g. possibly to some detail "Quick, look at the picture, did you see what she was doing?";
- Being adamant/confrontational;
- Teacher Leader directing focus e.g. from own agenda relating to evaluation of the group's developmental needs.

2. Teacher Leader Question or Challenge

The Teacher Leader comments in a way that signals to the group that this trigger is significant/intriguing and worth exploring. Their intervention initiates the tutoring event. Not all talk becomes a 'tutoring event' of course. Many comments may get brief attention and be allowed to close and move on, particularly where an easy consensus exists or the Teacher Leader judges the topic to be either beyond the group or relatively unimportant for them at this stage (given that it will be revisited many times as per Bruner's spiral).

3. Call for Knowledge/Understanding

The Teacher Leader shapes and monitors talk with the goal of getting the group members:

- to identify an appropriate knowledge area to which to relate what they are seeing;
- to bring to the forefront of their mind, any relevant 'bits' of that knowledge;
- to articulate, assemble and arrange those 'bits' in a cohesive way;
- to review and evaluate what they (collectively) know in the light of what they are observing;
- to reveal gaps, mismatches, inappropriate assumptions and inferences.

The Teacher Leader's role in this review and evaluation talk activity is to support ways of getting the knowledge 'out there' where it can be examined. S/he does this initially by accepting 'literal' knowledge but, in being given an opportunity to 'see' what the group knows, s/he can by reiterating and re-focussing, call for elaboration, extension and refinement. Refinement is generally achieved through grounding the talk in theory and observational evidence.

4. New Theory/Insights

It is only through theorising about 'the practical' that transfer of knowledge into individuals' own context can be expected to occur. The theorising supported by the Teacher Leader, may relate to seeing new connections between what is already known or may include an element of 'NEWness'. The Teacher Leader may introduce a new idea/concept/theoretical explanation at this point to achieve 'lift' in the level of the group's thinking about what is being observed and the principles, of which it is but one example. When Teacher Leaders refer to "telling" the group things it is in support of this kind of 'lift' in understanding rather than 'telling' answers to initial trigger questions.

5. Satisfactory Outcome

When the Teacher Leader decides to adopt a triggering occurrence as a tutoring event, s/he, through a knowledge of the group's current understandings, already has a sense of what would constitute a 'satisfactory outcome' in terms of learning. Their management of the tutoring event is aimed at this level of outcome. Reviewing the group's knowledge within the cycle has enabled the Teacher Leader to check on his/her initial estimation of the appropriateness of this learning goal. Closure of the tutoring event will relate the new/refined insights back to the original trigger. The Teacher Leader, or group, or both, sum up succinctly what was learnt. The Teacher Leader generally re-directs the focus back to the observation and may call for further confirmation or disconfirmation of the group's conclusions as an ongoing watching brief, but which is now backgrounded in favour of the next 'tutoring event'.

6. Additional/Extraneous Comment

At any time during the tutoring cycle, members of the group may offer observations or comments relating to what they are observing. The Teacher Leader always acknowledges these contributions (with the intent of encouraging members to continue contributing!) but makes an instantaneous judgement to let the comment '**drop through**'. This judgement regards the additional comment as;

- not building on/moving on this particular tutoring cycle;
- side tracking an already identified purposive focus for talk;

At another time such a comment might have been regarded as a 'trigger' or it may now be put 'on hold' to revisit later in the lesson, (although unlikely, as the action will have moved on), or during the discussion section of the inservice session.

References:

Clay, M.M. (1993). *Reading Recovery: A Guidebook for Teachers*. Auckland: Heinemann.

Clay, M.M. (1998). Transcript of Video "*Reading Recovery: A Second Chance*". Brisbane: Queensland Education.

Lyons, C.A., Pinnell, G.S. & DeFord, D.E. (1993). *Partners in Learning: Teachers and Children in Reading Recovery*. New York: Teachers College Press.

Roscos, K. & Bain, R. (1998). Professional Development as Intellectual Activity: Features of the Learning Environment and Evidence of Teachers' Intellectual Engagement. *Teacher Education* V 34 (2) p.89-115.

An Article written by Dr S. G. Burroughs-Lange for the Networker

Appendix 2

Permission Forms

Sample permission form for TLs

Dear

I am writing to ask you to participate in my research project.

I am exploring the role of the TL/ tutor at the screen in recognising and identifying cognitive dissonance as it occurs and using it as an educative resource. To do this I propose to observe and audio tape the critique of the live lesson behind the screen at your IPD/ OPD session. I am not interested in attributing or evaluating the contributions behind the screen but in identifying examples of cognitive dissonance as they occur and how these are used.

Transcripts of the audio tapes plus copies of my observations would be sent to you after the event for member checking and may be followed up by interviews in which your thoughts about cognitive dissonance and the session would be discussed.

The interview will be at a convenient time and location for you. To ensure confidentiality data would be anonymous and pseudonyms assigned. At this stage there are no plans for dissemination of this project. You will retain the right to opt out at any stage. If you have any queries please do not hesitate to contact me on a_ince@ioe.ac.uk or 07595 780 865. Thank you.

Best wishes

Amanda

I give permission to Amanda Ince to observe and audio tape lessons behind the screen at IPD/OPD for the purposes of research. I agree to be interviewed at a convenient time and location if appropriate. I understand that I can opt out at any point.

Signed: date:

Sample permission form for TLs in training

Dear

As part of my ongoing professional development in Reading Recovery I am studying for an international education doctorate (Ed.D) at the Institute of Education and I would like to invite you to participate in my study.

I aim to explore the role of the tutor at the screen in recognising and identifying cognitive dissonance as it occurs and using it as an educative resource. By "cognitive dissonance" I mean observations, comments, for example, that create a "pebble in the pond" moment. They provide new information, or a new way of thinking about something, an action, a concept, idea that challenges existing thinking. This challenge creates discomfort or cognitive dissonance, Mezirow describes it as a "disorientating dilemma" (1991). Individuals seek to reduce this discomfort by coming to terms in some way with the challenging information or approach. Often this seems to lead to new learning. Part of the TL role is to recognise such challenges and to facilitate discussion and exploration of ideas. The way in which TLs might introduce cognitive dissonance deliberately into the observation of lessons or recognise, use, manage or facilitate incidences of cognitive dissonance as they might naturally occur, is my focus for the study.

My research questions are:

- How can facilitators of complex adult professional learning identify cognitive dissonance as it occurs?
- How might recognition of cognitive dissonance enable its use as a vehicle for rendering new insights into a form that could be experienced as transformative?

To do this I propose to observe and audio tape the critique of the live lessons behind the screen at your MA:LLLD sessions. I am not interested in attributing or evaluating the contributions behind the screen but in identifying examples of cognitive dissonance as they occur and how these are used. I am interested in the interactions at the screen and how TLs might achieve and facilitate this with teachers over time. Transcripts of the audio tapes plus copies of my observations would be sent to the tutor facilitating the session after the event for member checking.

To ensure confidentiality data will be anonymous and pseudonyms assigned. Data will be stored as hard copy in a locked filing cabinet and for electronic data on a password protected laptop. Tapes will be destroyed when the study is completed.

Dissemination of this study will be through presentations at conferences including Reading Recovery Teacher Leader Professional Development Meetings (TLPDM) and the possibility of publishing in selected journals. A summary of the findings will be sent to you.

You will retain the right to opt out at any stage. If you have any queries please do not hesitate to contact me on a_ince@ioe.ac.uk or 07595 780 865. Thank you.

Best wishes
Amanda Ince

I give permission to Amanda Ince to observe and audio tape lessons behind the screen at IPD/OPD for the purposes of research. I agree to be interviewed at a convenient time and location if appropriate. I understand that I can opt out at any point.

Signed:

Printed name: Date:

Sample permission form for programme tutors on MA:LLLD

Dear Colleague

As part of my ongoing professional development in Reading Recovery I am studying for an international education doctorate (Ed.D) at the Institute of Education and I would like to invite you to participate in my study.

I aim to explore the role of the tutor at the screen in recognising and identifying cognitive dissonance as it occurs and using it as an educative resource. My research questions are:

- How can facilitators of complex adult professional learning identify cognitive dissonance as it occurs?
- How might recognition of cognitive dissonance enable its use as a vehicle for rendering new insights into a form that could be experienced as transformative?

To do this I propose to observe and audio tape the critique of the live lessons behind the screen led by you at the MA:LLLD London group sessions. I am not interested in attributing or evaluating the contributions behind the screen but in identifying examples of cognitive dissonance as they occur and how these are used. I am interested in the interactions at the screen and how the tutor might achieve and facilitate this with Reading Recovery professionals over time. Transcripts of the audio tapes plus copies of my observations would be sent to you after the event for member checking.

In addition, I would like to collect your reflections on the observed session/s, your views on cognitive dissonance and how you perceive and facilitate any change over time when working with your MA:LLLD group and Tls in the field. This would be through an informal, semi-structured, audio taped interview at a time and location convenient to you.

To ensure confidentiality data will be anonymous and pseudonyms assigned. Data will be stored as hard copy in a locked filing cabinet and for electronic data on a password protected laptop. Tapes will be destroyed on completion of the study.

Dissemination of this study will be through presentations at conferences including Reading Recovery Teacher Leader Professional Development Meetings (TLPDM) , programme tutor team meetings if appropriate and the possibility of publishing in selected journals. A summary of the findings will be sent to you.

You will retain the right to opt out at any stage. If you have any queries please do not hesitate to contact me on a.ince@ioe.ac.uk or 07595 780 865. Thank you.

Best wishes
Amanda Ince

I..... give permission to Amanda Ince to observe and audio tape lessons behind the screen at IPD/OPD for the purposes of research. I agree to be interviewed at a convenient time and location if appropriate. I understand that I can opt out at any point.

Signed:

Printed name: Date:.....

Sample permission form for parents

Dear

I am a member of the European Centre for Reading Recovery trainer co-ordinator team based at the Institute of Education. As part of my ongoing professional development in Reading Recovery I am studying for an international education doctorate (Ed.D) at the Institute of Education and I would like your permission for your child to participate in my study.

My study is about how the Teacher Leader works with teachers behind the screen to improve the children's literacy. To find out about this I plan to audio tape the Teacher Leader and the Teachers working on their side of the screen whilst your child has their lesson on the other side. To help me transcribe the tapes of the Teacher Leader and teachers I would like your permission to audio tape your child's Reading Recovery lesson behind the screen at the (name of centre) Reading Recovery centre as a point of reference. In addition, I would like your permission to ask for your child's consent to be taped too.

No information on your child would be recorded or kept. The lessons will be labelled as "lesson 1, child 1" and so on to maintain confidentiality. The copy of your child's lesson will be destroyed once it has been used to help with the transcription and analysis of the Teacher discussion tapes. Whilst I am transcribing the tapes they will be stored in a locked filing cabinet.

You will retain the right to opt out at any stage. If you have any queries please do not hesitate to contact me on a.ince@ioe.ac.uk or 07595 780 865. Thank you.

Best wishes
Amanda Ince

I give permission to Amanda Ince to observe and audio tape my child's Reading Recovery lesson behind the screen at (name of Reading Recovery centre) for the purposes of research. I agree that Amanda Ince can ask my child if they can be audiotaped. I understand that I can withdraw consent at any point.

Signed:

Printed name: Date:

Sample permission form for children:

Please can I audiotape your Reading Recovery lesson?



Date: